Municipal Separate Storm Sewer System
National Pollutant Discharge
Elimination System

Joint Annual Report

Cycle 4 - Year 2

October 1, 2017 Thru September 30, 2018

Submitted by
Northern Palm Beach County
Improvement District
as Lead Permittee

prepared by
MOCK•ROOS

NPDES

MS4 NPDES
A Joint Program of Palm Beach County Permittees

Palm Beach County MS4
Permit No. FLS000018-004

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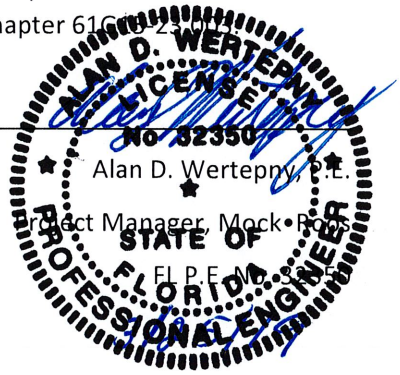
Report Certification

Engineer's Certification

I hereby certify, as a Professional Engineer in the State of Florida, that this Cycle 4, 2nd Year, Joint Annual Report for the Florida Department of Environmental Protection National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Permit for Palm Beach County (Permit No. FLS000018-004) was assembled under by direct responsible charge. This certification is provided in accordance with Florida Board of professional Engineers Rule of Certification under Chapter 61G15-23.004.



Alan D. Wertepny, P.E.

Project Manager, Mock•Roos

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Florida C.A. No. 48

(Reproductions are not valid unless signed, dated, and embossed with an Engineer's Seal)

Permittee Certifications

Certifications for the individual permittee annual reports are included in each individual annual report form, which are attached to this Joint Report as Appendices 1 through 40

1.0 Palm Beach County MS4 Program

1.1 Introduction

The Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) is a federal program designed to reduce stormwater pollutant discharges to receiving waters of the United States. In 1987, the United States Environmental Protection Agency (EPA) was required under Section 402 (p) of the Clean Water Act (N40CFR Part 112.26) to establish final regulations governing stormwater discharge permit application requirements. In 1990, the Federal Register indicated that Palm Beach County was to begin compliance with the program. In 1997, the first 5-year permit (No. FLS000018) was issued by EPA to Palm Beach County's permittees. In 2001, the Florida Department of Environmental Protection (Department) received delegation from EPA for the MS4 Programs. In November 2002, the Cycle 2 MS4 Permit was issued by the Department. The Cycle 3 permit was issued on March 2, 2011, and the Cycle 4 Permit was issued on September 8, 2016.

1.2 Permittees

There are 40 permittees identified in the Cycle 4 MS4 permit. *Table 1-1* is a list of the designated MS4 NPDES stormwater management program contacts for each of the permittees.

1.3 Steering Committee

To coordinate the joint activities in Palm Beach County's MS4 Program, the permittees established an MS4 Steering Committee in 1991. The seven-member Steering Committee is comprised of two representatives of large municipalities, two representatives of smaller municipalities, one representative from the lead permittee, one representative of special districts, and one representative from Palm Beach County. A list of the MS4 Steering Committee and administrative personnel is provided in *Table 1-2*. Minutes of all meetings and descriptions of programs overseen by the Steering Committee may be viewed on the Palm Beach County MS4 NPDES website at http://www.pbco-npdes.org. Since 2014 we have had 13, 693 visitors.

During the reporting period, the Steering Committee met six times. Permittee representation at the meetings averaged eighty-one percent. Major meeting agenda items included the following:

- 2018 Program Schedule
- Cycle 4, 1st Year Annual Report
- Income and Disbursement Reports
- 2018-2019 Program Budget Estimates
- FDEP Sedimentation & Erosion Control Training
- Refresher Training Session
- Water Quality Monitoring Program
- Public Education Program
- FDEP Interview/Presentation
- Cycle 4 – Total Maximum Daily Load Programs
- MS4 Websites - pbco-npdes.org and StormwaterAndMe.org

1.4 Interlocal Agreements

Northern Palm Beach County Improvement District (Northern) acts as lead permittee for the Palm Beach coalition of permittees. As the lead permittee, Northern re-entered into Interlocal Agreements with each of the other permittees in 2017 for the purposes of identifying duties and responsibilities of the parties and fulfilling the conditions of the Palm Beach County Cycle 4 MS4 permit. Through these Interlocal Agreements, cost sharing for joint activities is provided by each of the permittees.

This joint annual report was reviewed by the permittees and approved by the Steering Committee.

Table 1-1
Permittee Contacts

Appendix No.	Permittee, Address	Name, Title, Telephone
1	Atlantis, City of 260 Orange Tree Drive Atlantis, FL 33462	Steven Mazuk Utilities/Public Works Director (561) 965-1744
2	Belle Glade, City of 110 Dr. Martin Luther King, Jr. Blvd. Belle Glade, FL 33430	Lomax Harrelle City Manager (561) 996-0100
3	Boca Raton, City of 201 West Palmetto Park Road Boca Raton, FL 33432	Zachary Bihr, P.E. Project Engineer (561) 416-3402
4	Boynton Beach, City of 124 East Woolbright Road Boynton Beach, FL 33435	Angela A. Prymas, P.E. Stormwater Supervisor (561) 742-6421
5	Cloud Lake, Town of 100 Lang Road Cloud Lake, FL 33406-3222	Dorothy C. Gravelin Town Clerk (561) 686-2815
6	Delray Beach, City of 434 S. Swinton Avenue Delray Beach, FL 33444-2698	Jeffrey Needle Asst. Director of Environmental Services (561) 243-7320
7	FDOT – District Four 3400 West Commercial Boulevard Ft. Lauderdale, FL 33309-3421	Ivette Leiva NPDES Coordinator (954) 777-4644
8	FDOT – Turnpike Enterprise P. O. Box 9828 Ft. Lauderdale, FL 33310-9828	Troy Craig NPDES Coordinator (954) 934-1213
9	Glen Ridge, Town of 1501 Glen Road West Palm Beach, FL 33406	John J. Deal Town Manager (561) 697-8868
10	Greenacres, City of 5750 Melaleuca Greenacres, FL 33463	Carlos Cedeno Public Works Director (561) 642-2074
11	Gulf Stream, Town of 100 Sea Road Gulf Stream, FL 33483-7427	Greg Dunham Town Manager (561) 276-5116
12	Haverhill, Town of 4585 Charlotte Street Haverhill, FL 33417-5911	Joseph Roche Director of Public Works (561) 689-0370
13	Highland Beach, Town of 3614 South Ocean Blvd. Highland Beach, FL 33487	Marshall Labadie Town Manager (561) 278-4548

14	Hypoluxo, Town of 7580 S. Federal Highway Hypoluxo, FL 33462	Leonard G. Rubin, P.A. Town Attorney (561) 721-1683
15	Indian Trail Improvement District 13476 61st Street North West Palm Beach, FL 33412-1915	Greg Shafer Director of Stormwater (561) 793-0874
16	Juno Beach, Town of 340 Ocean Drive Juno Beach, FL 33408	Anthony R. Meriano Director of Public Works (561) 626-1122
17	Jupiter, Town of 210 Military Trail Jupiter, FL 33458	David J. Rotar Utility Services Manager (561) 741-2705
18	Jupiter Inlet Colony, Town of 1 Colony Road Jupiter Inlet Colony, FL 33469	John Pruitt Administrative Officer (561) 746-3787
19	Lake Clarke Shores, Town of 1701 Barbados Road West Palm Beach, FL 33406	Damon Gammons Utilities Superintendent (561) 642-7870
20	Lake Park, Town of 650 Old Dixie Highway Lake Park, FL 33403	Richard Scherle Public Works Director (561) 908-3874
21	Lake Worth, City of 7 North Dixie Highway Lake Worth, FL 33461	Brian Shields Water Utilities Director (561) 586-1675
22	Lantana, Town of 500 Greynolds Circle Lantana, FL 33462	Jerry Darr Assistant Utilities Director (561) 540-5758
23	Manalapan, Town of 600 S. Ocean Blvd. Manalapan, FL 33462-3398	Lisa Petersen Town Clerk (561) 383-2541
24	Mangonia Park, Town of 1755 East Tiffany Drive Mangonia Park, FL 33407	Kenneth Metcalf Town Manager (561) 848-1235
25	Northern Palm Beach County Improvement District 359 Hiatt Drive Palm Beach Gardens, FL 33418	Jared Kneiss Program Administrator (561) 624-7830
26	North Palm Beach, Village of 501 U.S. Highway No. 1 North Palm Beach, FL 33408	Steven Hallock Director of Public Works (561) 691-3440

27	Ocean Ridge, Town of 6450 N. Ocean Blvd. Ocean Ridge, FL 33435	Tracey Stevens Acting Town Manager (561) 732-2635
28	Palm Beach, Town of 260 S. County Road Palm Beach, FL 33480	Rob Weber Coastal Program Manager (561) 838-5440
29	Palm Beach County 2300 North Jog Road, 4th Floor West Palm Beach, FL 33411	Bonnie Finneran Environmental Director (561) 233-2400
30	Palm Beach Gardens, City of 10500 North Military Trail Palm Beach Gardens, FL 33410	Todd Engle, P.E. City Engineer (561) 804-7012
31	Palm Beach Shores, Town of 247 Edwards Lane Palm Beach Shores, FL 33404-5718	Alan Welch Public Services Director (561) 844-3457
32	Palm Springs, Village of 226 Cypress Lane Palm Springs, FL 33461	Angela Thul Stormwater Program Coordinator (561) 434-5122
33	Riviera Beach, City of 2391 Avenue L Riviera Beach, FL 33404	Sedrick Clarke Stormwater Coordinator (561) 845-4080
34	Royal Palm Beach, Village of 10996 Okeechobee Blvd. Royal Palm Beach, FL 33411	Paul L. Webster, P.E. Director of Public Works (561) 790-5122
35	South Bay, City of 335 S.W. Second Avenue South Bay, FL 33493	Edgar Kerr Director of Public Works (561) 996-6751
36	South Indian River WCD 15600 Jupiter Farms Road Jupiter, FL 33478	Michael Dillon Manager of Operations (561) 747-0550
37	South Palm Beach, Town of 3577 S. Ocean Blvd. South Palm Beach, FL 33480	Robert Kellogg Town Manager (561) 588-8889
38	Tequesta, Village of 136 Bridge Road Tequesta, FL 33469	Jay Wickman Superintendent of Water Distribution & Storm Water (561) 768-0484
39	Wellington, Village of 12300 Forest Hill Boulevard Wellington, FL 33414	Jim Barnes Village Manager (561) 791-4720
40	West Palm Beach, City of P. O. Box 3368 West Palm Beach, FL 33402	Poonam Kalkat Director of Public Utilities (561) 822-2220

Table 1-2 Palm Beach County MS4 Steering Committee	
Laurent Van Cott, P.E. Steering Committee Chair For Town of Mangonia Park Southern Design Group, Inc. Phone (561) 743-0501	Karen Brandon, P.E. Steering Committee Member For South Indian River Water Control District AECOM Phone (561) 684-3375
Jay Foy, P.E. Steering Committee Vice-Chair For City of Atlantis Stormwater J. Engineering, Inc. Phone (561) 242-0028	Bonnie Finneran Steering Committee Member Palm Beach County Phone (561) 233-2400
Jeff Needle, P.E. Steering Committee Secretary City of Delray Beach Phone (561) 243-7000, x-4117	Maurice Morel, P.E. Steering Committee Member City of Boca Raton Phone (561) 416-3402
Dan Beatty, P.E. Steering Committee Member North Palm Beach County Improvement District Phone (561) 624-7830	

Administration – Northern Palm Beach County Improvement District as Lead Permittee	
Alan Wertepny, P.E. Mock, Roos & Associates, Inc. Program Manager Phone (561) 683-3113, x-231	Betsy S. Burden, Esq. Caldwell Pacetti Edwards Schoech & Viator LLP Legal Counsel Phone (561) 655-0620
Anne Capelli Mock, Roos & Associates, Inc. Public Education Coordinator Phone (561) 683-3113, x-287	Laura Ham, CPA Northern Palm Beach County Improvement District Budget Manager Phone (561) 624-7830
Brian Einkauf Mock, Roos & Associates, Inc. Webmaster Phone (561) 683-3113, x-250	Jane Hayes Mock, Roos & Associates, Inc. Administrative Assistant Phone (561) 683-3113, x-264

2.0 Training Program

The Palm Beach County MS4 permit requires that permittees provide training on three topics. Annual follow-up (or "refresher") training is required for those that have received the initial training. The three topics are:

- Identification & reporting procedures for a suspected illicit discharge or dumping in the MS4 for all appropriate permittee personnel (including field crews, fleet maintenance staff, and inspectors) and contractors. (Part III.A.7.c)
- Spill prevention, containment & response procedures (including techniques for mitigating pollution from spills) for all appropriate permittee personnel (including field crews, firefighters, fleet maintenance staff, and inspectors). (Part III.A.7.d)
- Stormwater management and erosion and sedimentation control BMPs for construction sites for site plan reviewers, site operators, and site inspectors. Construction site inspectors must be certified through the Florida Stormwater, Erosion, and Sedimentation Control Inspector Training programs, or equivalent. (Part III.A.9.c)

The Palm Beach County MS4 permittees carry out a joint training program that is available to all permittee personnel, as well as contractors and private individuals.

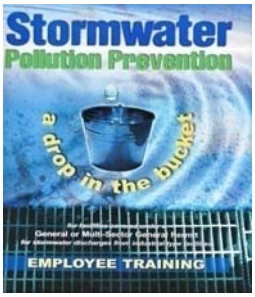
EXCAL Visual Video Training: The illicit discharge, spill prevention, and construction site BMP refresher training topics are covered by one or more EXCAL Visual (www.excalvisual.com) videos presented at a group training session, held at least once each year, typically in March. Attendance logs are maintained for each training session. In addition, the group maintains a lending library of videos for the permittees to borrow anytime for use at in-house training sessions.

EXCAL Visual videos may not be reproduced, but additional copies may be purchased from the vendor to assist in meeting training requirements.

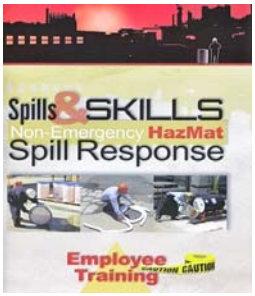
Videos currently in the Library include the following:

1. Rain Check: This video provides instruction on good housekeeping, spill response, materials management, vehicle fueling and washing and other BMPs outlined in EPA's "National Menu of BMPs."

2. A Drop in the Bucket: The video focuses on employee training that describes concepts and practices of stormwater pollution prevention. The video describes stormwater pollution and its negative effects on people, wildlife, and the environment. It includes good housekeeping, spill prevention, exposure minimization, maintenance and spill clean-up. It also provides an overview of the work practices that can be effective for stormwater pollution prevention.

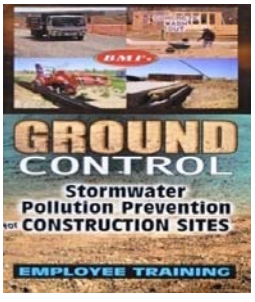


3. Spills & Skills: The video is designed to help train non-Hazardous Waste Operations and Emergency Response (HAZWOPER) employees on dealing with a hazardous material (or hazardous waste) spill, leak or release: what to do if you discover a hazmat release; how to determine if the release requires HAZWOPER-trained responders or not; if it is a hazmat emergency release (HAZWOPER event), what to do then; if it is a non-HAZWOPER event (an "incidental release"), the discreet steps involved to clean it up; the "step-across" test; the clean-up supplies and equipment you should expect to find in the spill locker; different styles of absorbent (loose, pads, pillows, socks) and how to use each; how to use all the equipment and supplies safely and effectively; how to manage the clean-up of wastes; and, post clean-up measures.



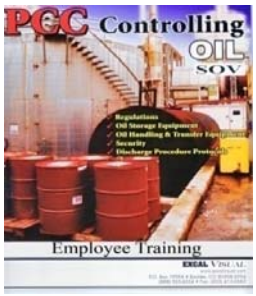
4. Storm Warnings - Storm Water Pollution Prevention: Describes Best Management Practices that are crucial for compliance with facility Stormwater Pollution Prevention Plans including: good housekeeping, exposure minimization, and soil-cleanup.

5. Ground Control - Stormwater Pollution Prevention for Construction Site: The video focuses on BMPs that are widely used at most construction sites including: silt fences, stabilized entrances/exits, drop inlet protectors and others. The program illustrates how these BMPs work and how they can fail. Employees are encouraged to promptly report ay failing BMPs. By making all employees "look-



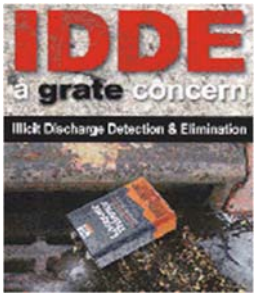
outs" for BMP problems, this training program is an important part of the required BMP maintenance program.

6. Controlling Oil - Spill Prevention, Control & Countermeasure (SPCC): This 20-minute video instructs employees on SPCC Plans, oil pollution regulations, effective oil storage and oil transfer procedures. It also instructs employees on "discharge procedure protocols" first response measures to take when a discharge is discovered. The video also addresses site security measures to take to protect oil handling facilities against vandalism and terrorism.

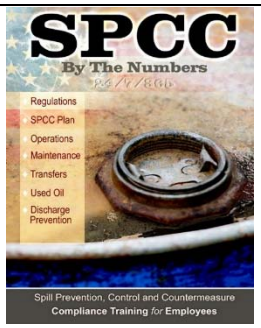


7. Storm Watch - Municipal Stormwater Pollution Prevention: The video focuses on municipal BMPs such as good housekeeping, spill response, materials storage and handling, landscape maintenance, and street maintenance. Employees working in maintenance and other departments can benefit from this training video. The video shows employees how to spot potential "illicit discharges."

8. Illicit Discharge Detection & Elimination (IDDE): Instructs viewers how to spot a possible illicit discharge or signs of past discharges. It discusses direct and indirect discharges and shows viewers what to look for at curb inlets, drop inlets and outfalls. It shows examples of the tell-tale signs often left by past illicit discharges. It encourages employees to be vigilant in watching for signs of illicit discharges and to report their suspicions to the storm drainage staff, Public Works Department or Environmental Staff who can then initiate the process of tracking the source of the discharge and eliminating it.



9. Spill Prevention, Control and Countermeasure by the Numbers 24/7/365: The video is designed to familiarize employees and contractors with the fundamental rquirements as appliee at fixed facilities that store, use or handle oil in above ground containers (ASTs or portable containers such as 55 gallon drums). It shows employees and contractors at regulated facilities their role in the on-going process of oil spill prevention.



The Palm Beach County Group training session conducted in 2017/2018 included:

1. A PowerPoint presentation and videos (Ground Control, Spills & Skills and IDDE) covering the three required annual training topics (spill prevention and response, illicit discharge, and sediment and erosion control for construction sites) was held on March 21, 2018. Attendees for the training included 72 representatives from the Palm Beach County MS4 permittees. Twenty-nine of the forty permittees were represented at this training session.

2. Florida Stormwater, Erosion and Sedimentation Control Inspector Training Program – Palm Beach County MS4 permittees again sponsored the FDEP course on May 23, & 24, 2018. The class, held at the Town of Jupiter Community Center, was taught by Cheryl Moore, a state certified instructor. A total of 96 individuals attended, including 23 private individuals, 37 municipal construction site inspectors, 12 municipal site plan reviewers, and 24 municipal construction site operators.

3.0 Public Education Program

The Palm Beach County MS4 permittees have undertaken a jointly-funded program to meet the public education requirements of the MS4 permit. In so doing, all permittees participate in conducting the program. The premise of a joint program is that a unified message, repeated throughout the County, will have more of an impact than 40 separate messages. The Stormwater and Me (SAM) program, as it is called, kicked off in 2009 and the website has had over 6,122 visitors.

Objective:

The objective of the public education program is to put relevant information in the hands of the residents of and visitors to the Palm Beach County geographic area, so they can make better decisions with respect to pesticides, herbicides, fertilizers, illicit discharges, illegal dumping, and the disposal of household hazardous waste. The intent is that this will result in less of these items ending up in our stormwater systems and, in turn, our water bodies.

Topics:

As prescribed by the MS4 permit, the following topics are covered by the public education program:

- Encourage citizens to reduce their use of pesticides, herbicides, and fertilizers. [Part III.A.6.]
- Promote, publicize and facilitate public reporting of the presence of illicit discharges and improper disposal of materials into the MS4. [Part III.A.7.e.]
- Encourage the proper use and disposal of used motor vehicles fluids, leftover hazardous household products, and lead acid batteries. [Part III.A.7.f.]

Target Audience:

The target audience of the program is residents (children and adults) of and visitors to Palm Beach County, Florida.

Activities and Materials:

This reporting period, the SAM public outreach program included three 30-second Public Service Announcements (PSAs) dealing with pet waste pickup, keeping grass clippings off the streets, and

reducing the usage of pesticides, herbicides and fertilizers. The PSAs were aired on five commercial television networks (Discovery, Animal Planet, Weather Channel, HGTV, and CNN), broadcast by a local cable television provider (Comcast) from January 2018 through March 2018 to all broadcast zones within Palm Beach County. A total of 2,376 PSAs were aired. The PSAs were also aired by local/municipal TV stations throughout the year and many permittees play the videos on their website. Copies of the PSAs can be found on the SAM website: StormwaterAndMe.org.

Finally, visitors to the Xfinity.com website home page were exposed to 53,083 pre-roll video impressions of our PSAs, by the end of the 3 months of the campaign.

During the 2017-2018 reporting period, the Palm Beach County Extension Service reported that it distributed 35,900 brochures, conducted 5 neighborhood presentations reaching 194 participants, produced 25 displays, conducted 55 school presentations reaching 1,896 participants, conducted 202 workshops reaching 7,603 participants, conducted 24 special events reaching 3,701 participants and provided Green Industry BMP training to 148 participants. The County Extension Service has estimated that its outreach program reached about 8.6% of the population in Palm Beach County. Costs for these programs total about $75,000.

The Palm Beach County Solid Waste Authority (SWA) continued to carry out a public education/outreach program to educate Palm Beach County residents and visitors about proper disposal of household hazardous waste (HHW). Through the MS4 NPDES Interlocal Agreement between Palm Beach County and Northern Palm Beach County Improvement District, SWA continues its program, in part to fulfill the permit requirement that all permittees educate their residents on proper disposal of HHW. During the 2017-2018 reporting period, SWA reported that it distributed 105,600 brochures, collected 4.2 million pounds of HHW, conducted 168 neighborhood presentations reaching 6,402 participants, distributed 7 newsletters, produced 138 displays, aired

close to 4,000 PSAs, conducted 218 school presentations reaching 8,320 participants, conducted 5 workshops reaching 69 participants, and conducted 38 special events reaching 275,684 participants. SWA also hosts a public outreach website at http://www.swa.org/site/hhw/haz_waste_home/hazardous_waste_portal.htm. SWA has estimated that its outreach program reached 80% of the population in Palm Beach County. Costs for these programs total about $2.6 million.

Methods for Distribution:

The television PSAs allow the greatest opportunity for the distribution of information. In addition, the website, brochures, and meetings allow for the presentation of more in-depth information.

Annual Schedule:

Public education efforts are emphasized during the months of January through March, when residential population in the County is at its highest.

Documentation:

The Group's Public Education Coordinator, SWA and PBC Extension Services, respectively, maintain record information for all materials distributed.

Responsible Entities:

The program is coordinated by the Palm Beach County MS4 Steering Committee administrative staff. HHW outreach is carried out by the Palm Beach County Solid Waste Authority (SWA) for all permittees under the inter-local agreement with Palm Beach County.

Resources Allocated:

The 2017-2018 allocation for the public education program (not including Palm Beach County Programs) was $35,000.

Assessment Method:

The bottom line on the effectiveness of public education is if the receiving waters experience improved water quality. Therefore, the water quality monitoring is offered as a measure of the collective effectiveness of this and other MS4 permit programs.

Public Reporting of Illicit Discharge:

The StormwaterAndMe.org website contains information on stormwater pollution and illicit discharges. Included is a list of contacts for each of the 40 permittees to report an illicit discharge or spill.

4.0 Total Maximum Daily Load (TMDL) Program

4.1 Description

The PBC MS4 permit includes TMDL requirements and a schedule for developing an implementation plan to reduce the discharge of pollutants from each affected permittee's MS4 to the maximum extent practicable. No TMDLs were set for the Palm Beach County Cycle 1 or Cycle 2 permits. For Cycle 3, there were seven EPA TMDLs that were evaluated and addressed by the applicable MS4s. As of the issuance date of the Cycle 4 permit, both the Department and EPA had issued TMDLs that require action.

4.2 Established and Adopted TMDLs – Cycle 4

TMDLs established by EPA and verified by the Department or adopted by the Department as of the issuance date of the Cycle 4 permit (September 8, 2016), along with the respective potentially affected permittees, are listed in *Table 4-1*.

During Year 1 of this permit cycle the eight permittees identified as TMDL stakeholders submitted Prioritization Plans which were approved by the Department. The schedules for implementation activities are identified in *Table 4-2*.

4.3 FDEP Planning List

Although no action is required under the MS4 permit for TMDLs in the planning stage, this information is still tracked by the MS4 group. FDEP has a planning list for future development of TMDLs through 2022. As of November 10, 2017, seven water bodies in Palm Beach County were on the Planning List. The Loxahatchee River Reasonable Assurance Plan (RAP), being coordinated by FDEP, addresses three of the water bodies on the planning list (North Fork WBID 3226D, NW Fork 3226A and SW Fork 3226C). The RAP effectively removes these three future TMDLs from the Planning List, resulting in just four Palm Beach County water bodies remaining on the Planning List – *See Table 4-3.*

Table 4-1
Cycle 4 TMDLs in Palm Beach County

Agency	WBID	Segment Name	Basin	Constituent	TMDL	Percent Reduction	Date	MS4s Stakeholder
EPA	3226C	SW Fork Loxahatchee River	St. Lucie/ Loxahatchee	Fecal Coliform	<43 (counts/100 ml)	93	05/16/12	Jupiter, FDOT, PBC, SIRWCD, Turnpike, NPBCID
EPA	3262A	Lake Ida	Lake Worth Lagoon	Nutrients	TN=0.857 mg/l TP=0.062 mg/l	20 45	11/09/12	Delray, Boynton, FDOT, PBC
FDEP	3364A	E-1 Canal	Lake Worth Lagoon	Fecal Coliform	<400 (counts/100 ml)	94 0	08/31/11	FDOT, PBC

Table 4-2
Cycle 4 Prioritized TMDLs

MS4 Stakeholder	WBID-Waterbody-TMDL	Monitoring Summary Due (Year 3 AR)	BPCP Due (Year 3 AR)	Supplemental SWMP Due (Year 4 AR)
Boynton Beach	3262A- Lake IDA – Nutrients (EPA)	03/31/20	N/A	03/31/21
Delray Beach	3262A- Lake IDA – Nutrients (EPA)	03/31/20	N/A	03/31/21
FDOT District 4	3264A – E-1 Canal – Bacteria Loxahatchee River RAP (3226C)	N/A	03/31/20	N/A
FDOT Turnpike Enterprise	3226C – SW Loxahatchee River - Bacteria	N/A	03/31/20	N/A
Jupiter	Loxahatchee River RAP (3226C)	N/A	03/31/20	N/A
NPBCID	Loxahatchee River RAP (3226C)	N/A	03/31/20	N/A
Palm Beach County	3264A – E-1 Canal Bacteria Loxahatchee River RAP (3226C)	N/A	03/31/20	N/A
SIRWCD	Loxahatchee River RAP (3226C)	N/A	03/31/20	N/A

Table 4-3
11/10/17 FDEP Planning List for TMDLs in Palm Beach County

WBID	Segment Name	Basin	Parameter	MS4 Stakeholders
3262A	Lake Ida	Lake Worth Lagoon	TP and Chlorophyll-a	Palm Beach County, Delray Beach, Boynton Beach, FDOT-District IV
3245C4	Pine Lake	Lake Worth Lagoon	Chlorophyll-a	Palm Beach County, FDOT – District IV, West Palm Beach
3262B1	E-1	Lake Worth Lagoon	Chlorophyll-a	Palm Beach County, FDOT-District IV
3248	New River Canal (North Segment)	Everglades	Nutrient	South Bay

4.4 TMDL Activities

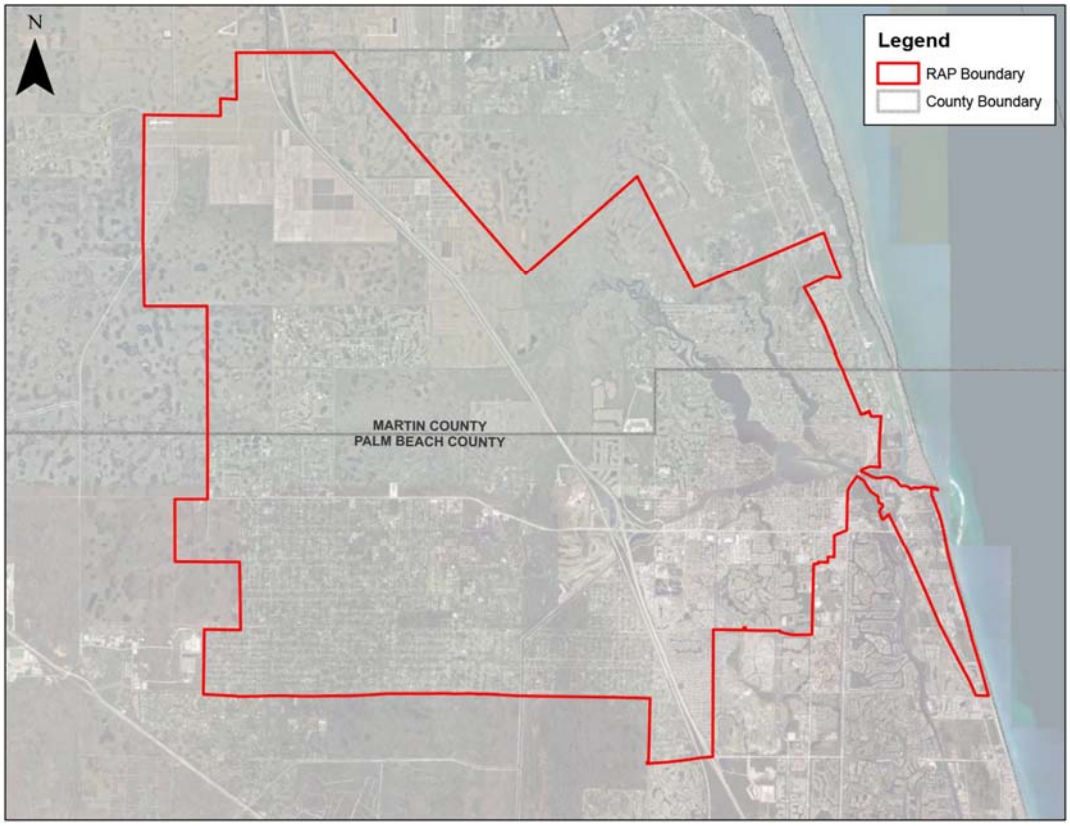
During Year 2, of the Cycle 4 Permit, the MS4 permittees actively participated in three programs to further address the identified impairments in the Loxahatchee River (nutrients/bacteria), Lake Ida (nutrients), and the E-1 Canal in the Hillsboro Basin (bacteria).

Southwest Fork Loxahatchee River

For the last two years, stakeholders in the **Loxahatchee River Basin** have met with the FDEPs Division of Environmental Assessment and Restoration (DEAR) and the Loxahatchee River Management Coordinating Council to develop and implement a RAP to restore the river. Activities have included:

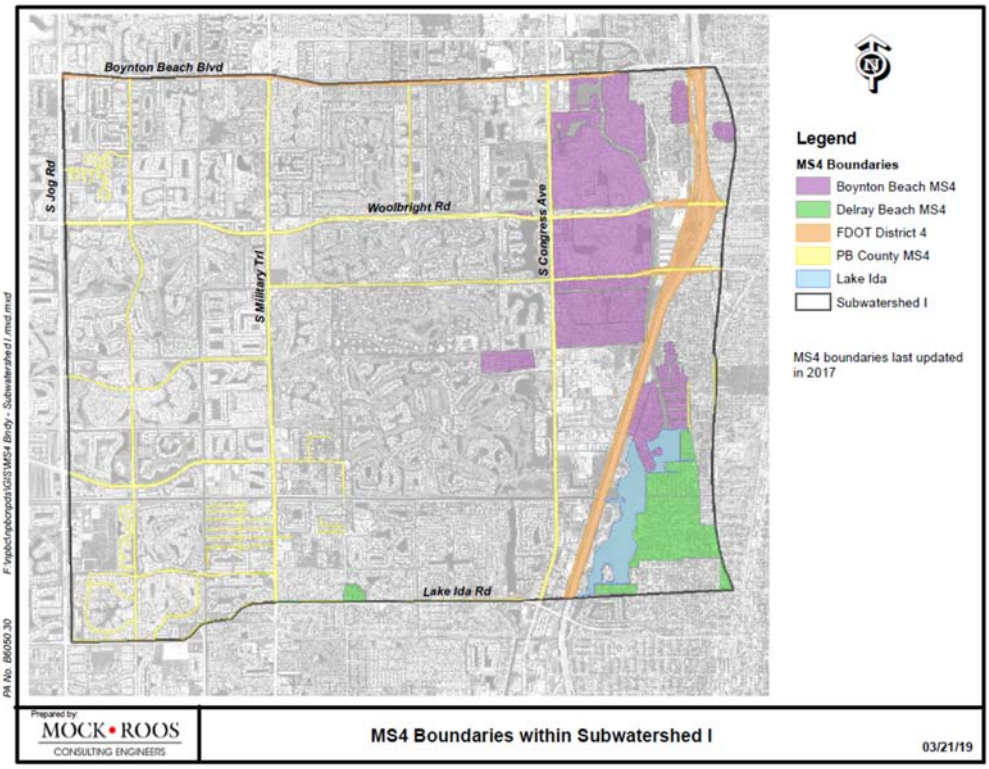
1. Identification of the RAP Boundary
2. Evaluations of the existing water quality data and establishment of a surface water monitoring plan for future assessments
3. Development of a Pollutant Load Screening Model
4. Establishment of baseline and load reduction targets for total nitrogen and total phosphorous
5. Listing of projects that have or will reduce both nutrient and bacterial loadings

The Loxahatchee Rap is still underway with a projected schedule for completion of the plan in 2019.



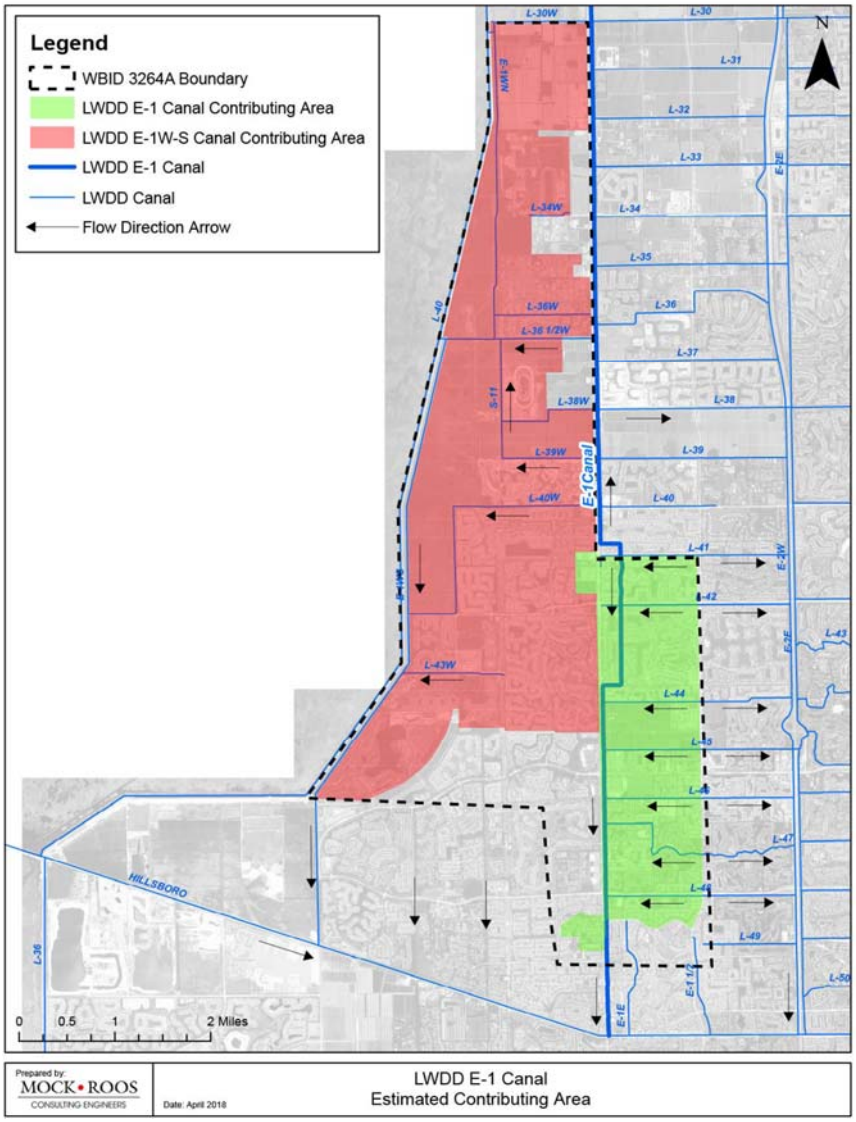
Lake Ida (WBID 3262A)

The National Oceanic and Atmospheric Administration (NOAA) completed a Watershed Management Plan (WMP) for the **Boynton Inlet** in June of 2018. The purpose of this Watershed Management Plan was to identify and evaluate various nutrient load reduction strategies (effectiveness and cost), to reduce nutrient loading to the Boynton Inlet and offshore reefs and to meet TMDL reduction goals. NOAA's Boynton Inlet Study incorporated both SFWMD C-15 and C-16 Basins (approximately 150 square mile area). One of the sub-watersheds included in this plan is Lake Ida. With the assistance of local stakeholders, the Boynton Inlet WMP included development of a land based nutrient pollutant loading model, a water budget assessment, stakeholder meetings, site visits, data sharing, best management practices to achieve load reduction goals, and a management tool to evaluate BMP implementation scenarios. For the benefit of the MS4 stakeholders, the WMP provided pollutant loading estimates for **Lake Ida**, stakeholder consensus on the Lake Ida contributing area and each MS4's contribution (area and pollutant load), review of current fertilizer ordinances, and potential BMPs to meet TMDL goals. It was estimated that the MS4s represent approximately 16% of the contributing area and 20% of the pollutant loading. Reduction of fertilizer usage appears to be the most potentially beneficial and cost effective best management strategy.



E-1 Canal (WBID 3364A)

To assist the MS4s in addressing the **E-1 Canal** TMDL, FDEP's watershed boundary was examined. Based on completed hydrologic studies, South Florida Water Management and Lake Worth Drainage District permits, existing drainage canals and control elevations, the WBID 3364A boundary as determined by FDEP is inaccurate and requires extensive revision. If the corrected boundary is applied, the land contributing to the E-1 Canal (Hillsboro Basin) is substantially reduced (by 79%). In the graphic below, the area shown in green is the accurate WBID Boundary. It is understood that the impacted MS4s (Palm Beach County and Florida Department of Transportation, District 4) will use the corrected boundary in developing an E-1 Canal bacterial control plan.



5.0 Water Quality Monitoring Program

5.1 Description

In order to provide water quality monitoring data to permittees, and to assist them with their required water quality assessment programs, the group made the decision to continue the +19-year joint ambient water quality monitoring program. The monitoring program includes the following components:

- ambient water quality sampling
- water quality data analyses
- trend analyses
- annual pollutant loading estimates in Year 3 of each permit cycle
- program modifications as needed

The Palm Beach County MS4 NPDES permit monitoring program includes 40 ambient water quality monitoring sites which were selected after coordination among the South Florida Water Management District (SFWMD), Palm Beach County Environmental Resource Management (ERM), the Loxahatchee River District (LRD), Broward County (BC), and the Palm Beach County permittees.

5.2 Monitoring Sites

Table 5-1 identifies each monitoring site location and provides the site designation, watershed name, the entity conducting the sampling, and the site location northing and easting coordinates. Note that site designations are unique within an individual agency but may be duplicated across agencies. Data for these sites are assigned a unique agency code and station identification in the State's database (dBHydro or WIN/STORET).

Figure 5-1 depicts the water quality monitoring site locations and shows the boundaries of the associated watersheds. Sites monitored by ERM are shown as circles, those monitored by the LRD are shown as squares, those monitored by SFWMD are shown as triangles, and those monitored by BC are shown as stars. White symbols signify marine or tidal sites and yellow symbols designate freshwater sites.

The LRD monitors four marine sites and three freshwater sites. ERM monitors ten marine sites and fifteen freshwater sites. The SFWMD monitors five freshwater sites and Broward County monitors

one freshwater and two marine water sites. All of Palm Beach County ERM, LRD and BC sampling results are in WIN/STORET and SFWMD data is in dBHydro.

The twenty-five sites monitored by ERM are sampled and initially analyzed in-situ by ERM staff using a multi-parameter water quality monitoring instrument. Water samples are collected, preserved and stored according to the Department Standard Operating Procedures. Quality assurance/quality control measures include pre-cleaned equipment blanks, field cleaned equipment blanks, field spikes, and the collection of duplicate samples.

Further analysis of samples of ERM's 14 Lake Worth Lagoon sites is handled by SFWMD. Analysis of the remaining 11 ERM sites is conducted by an independent laboratory under contract with ERM.

The water quality parameters and frequency being monitored by ERM, LRD, SFWMD and BC are listed in Table 5-2. For this reporting period several monitoring events were missed. PBC ERM experienced a significant staff absence due to extended medical leave. Also, the Lake Worth Lagoon monitoring routinely experiences missed monitoring events due to the monitoring protocol that requires tidal sites to be sampled "immediately at or prior to slack low tide." This allows only +/- 2 times per month when low tide is between 11:00 a.m. and 2:30 p.m., which may occur on weekends. The time on either side of this time frame is necessary for initial calibration, equipment decon, mobilization, travel, boat launch, boat recovery, travel, continuing calibration verification, and paper/tablet documentation work. Monitoring protocol prohibits monitoring during rain. Boating safety requirements prohibit monitoring during lightning events and winds exceeding 20 knots. Mechanical problems such as trailer lights malfunction and engine problems also result in missed monitoring events.

Table 5-3 (7 pages) provides a list of the parameters and the Florida Surface Water Quality Standards (WQ Standards) as promulgated in Florida Administrative Code (F.A.C.) 62-302.530, 62-302.532, and 62-302.530 (47)(b).

The water quality sampling program in Palm Beach County is a cooperative effort designed to incorporate desirable elements of existing monitoring programs being administered by various agencies throughout the County. Attempts to coordinate sampling frequencies, parameters, and methodologies are ongoing, but not all sampling programs produce results that are compatible for a combined analysis. Data for a given parameter, location, and event may be unavailable due to the specific goals of that agency's monitoring program or procedural variations, including event frequency, sample depth, methodology, and instrumentation.

5.3 Water Quality Monitoring Results and Exceedances

Standards

State water quality standards have become increasingly complicated in recent years, with differing types of water bodies having different established criteria, such as chlorophyll-a (corrected for pheophytin). Therefore, Table 5-3 has been prepared to provide a quick reference for determining exceedances in the water bodies being monitored in Palm Beach County. Furthermore, in Class I and Class III freshwater systems, the numeric limits for heavy metals are based on a logarithmic function of the water's total hardness measured at the time of the sampling. Thus, the last page of Table 5-3 provides the relationship of hardness to the calculated limit for cadmium, copper, lead and zinc.

Monitoring Results

The results of the monitoring conducted from October 2017 through September 2018 are provided in *Table 5-4* (40 pages). Analysis result values that were below the limits of detection ("BDL" or "non-detect") have been replaced in *Table 5-4* whenever possible with ½ of the respective minimum detection limit (MDL) value for a more reasonable analysis. MDLs were provided by Palm Beach County ERM for results that were reported as BDL within the data set. MDL values for sampling events from September 2004 to December 2004 were obtained directly from STORET where available and substituted for sample readings that were BDL. MDL values for data after December 2004 have been provided directly by the data supplier. MDLs are determined by instrumentation and method of analysis. These substitutions in *Table 5-4* have been highlighted in blue. MDL values in excess of the WQ Standard were not counted as exceedances.

Exceedances of the WQ Standards are highlighted in yellow in *Table 5-4*.

For samples where a total hardness was not measured, an exceedance limit for metals could not be calculated, and therefore, no exceedance could be identified.

For those results which require an annual geometric mean (to compare to the standard), the annual geometric mean was calculated for the reporting period (October – September).

Table 5-5 provides a summary of the number of exceedances at each site. Each cell where there was an exceedance provides the number of exceedances and the total number of samples taken at that site during the reporting period. For example, at Site 69 within the Loxahatchee River

watershed, two dissolved oxygen samples out of twelve taken were in exceedance of the WQ Standard.

Another summary of exceedances is provided below:

Parameter	Exceedance Location(s)
DO	C-16, C-18, C-51, N & NW Forks of Lox River, L-8, Nth New River Canal, Hillsboro Canal
Fecal coliform	Loxahatchee River (NW & SW Forks)
Turbidity	L-8 and C-51 Canals
pH	C-16, C-17, C-18, C-51, LWL-N, LWL-C, LWL-S
Chl-a	C-16, N Fork of Lox Rvr, LWL-N, LWL-C, LWL-S
TP	LWL-C, LWL-S
TN	LWL-C
Cadmium	C-16, C-17, C-18
Lead	C-18, Hillsboro Canal
Specific Conductance	C-51E

Comments

The criterion for fecal coliform in the NW and SW Forks of the Loxahatchee River (a natural Class II water body) is extremely low (< 43 cfu/100 ml) compared to all other water body classifications (< 400 cfu/ 100 ml). Potential sources of bacteria are being investigated by the Town of Jupiter and the Loxahatchee River District.

Exceedances of the turbidity in the L-8 and C-51 Canals is very likely linked to discharges from Lake Okeechobee.

Tabular Summaries

A statistical summary of each monitoring site, grouped by watershed, is presented in *Table 5-6* (24 pages). The table includes approximately 22 water quality parameters (21 measured parameters plus calculated TN) and all sampling events for each site's period of record. The periods of record range from 2 year to 19 years.

The following information is included in the table:

The period of record

Samples - The total number of sample events for the given site.

Count - The number of usable, numerical results for the given parameter.

Geometric Mean - Sample values are multiplied together then the nth root of the product is taken, where n is the number of samples

Mean - Average of the usable samples.

Max - The maximum value of the usable samples or "None" if no sample values were obtained.

Min - The minimum value of the usable samples or "None" if no sample values were obtained.

Standard Deviation - The standard deviation is based on the assumption that the data represents a sample of the population. This function uses an "n - 1" denominator and will return "None" if there are less than two usable samples.

$$\sqrt{\frac{n\cdot\sum x^2-\left(\sum x\right)^2}{n\cdot(n-1)}}$$

n = number of samples

x = value

Σx^2 = The sum of the squares of the values

$(\Sigma x)^2$ = The square of the sum of the values

Table 5-7 re-lists the geometric mean values for TN, TP, and Chl-a, at each site for the period of record. Historically, based on Chl-a, TN and/or TP, exceedances of the nutrient criteria have occurred in the C-15 Basin, Loxahatchee River, and all three watersheds of the Lake Worth Lagoon. This table highlights the individual monitoring sites where exceedances of water quality standards have occurred. For example, Site 31E in the C-15 watershed has a historical geometric mean of 21.33 ug/l which could be attributed to adjacent agricultural lands. As some of the agricultural lands are being replaced with residential development that incorporates Best Management Practices, the geometric mean is expected to decrease over time.

5.4 Trend Analysis

Figures 5-2, 5-3, and 5-4 (12 pages each) present water quality trend graphs for TN, TP, and Chl-a for the period of record. The trend analyses are based on the annual geometric mean of all the monitoring site values within each watershed, calculated on a calendar year (January 1 to December 31). The freshwater sites include data back to 1999, the marine sites include data from ERM that dates back to 2004.

Review of the trend graphs indicates the following:

Total Nitrogen trend graphs (*Figure 5-2*) indicate the concentrations are improving (decreasing) for nine watersheds: C-15, C-16, C-17, C-18, C-51, Loxahatchee, Lake Worth Lagoon North, Lake Worth Lagoon South and Hillsboro. Only the Lake Worth Lagoon Central watershed shows an increasing trend. However, the concentrations are well below the nitrogen numeric criteria of 0.66 mg/l. Two watersheds do not have enough data for a trend analysis (L-8 and S-2-6-7).

Total Phosphorus trend graphs (*Figure 5-3*) indicate a general improvement (decrease) or stabilization of values within all but two watersheds: C-51 and the Loxahatchee River. The S-2-6-7 does not have enough data for a trend analysis.

Chlorophyll-a trend graphs (*Figure 5-4*) indicate a general improvement (decrease) or stabilization of values within watersheds except for: Lake Worth Lagoon (North, Central, and South) and L-8. The S-2-6-7 does not have enough data for a trend analysis.

In summary, five watersheds (C-15, C-16, C-17, C-18 and Hillsboro Canal) are showing beneficial long-term trends for all three nutrient parameters, which may indicate the positive effects of the co-permittee Stormwater Management Programs. Five watersheds (C-51, Loxahatchee, Lake Worth

Lagoon (North, Central and South)) have declining water quality for one or more nutrient parameters. For only one of these (Lake Worth Lagoon North) is the trend above the Chlorophyll-a water quality criteria. This trend may be an indication that additional stormwater management programs should be considered. Two watersheds (L-8, S-2-6-7) have insufficient data for assessment.

5.5 Site Specific Water Quality Summaries

To provide the Palm Beach County MS4 permittees with site specific, as well as basin-wide, water quality trend information, historical data charts were developed using a "traffic light" symbology – red for exceedance of the water quality criteria, green for no exceedance, and yellow where there is no numeric standard). Since nutrient impairment is a major concern in Palm Beach County water bodies, Chl-a, TP, and TN were selected for this summary. FDEP has established a state-wide Chl-a numeric standard for all water bodies. However, for TP and TN, there is no numeric criteria for the South Florida Region Canals, resulting in 18 of the 40 monitoring sites without numeric criteria.

Tables 5-8 through *5-10* provide the historic record of annual geometric mean exceedance for each site for these three-nutrient based water quality parameters. The annual geometric mean calculation for each site is based on a calendar year, while the basin annual geometric mean is calculated using all the sample sites and data within the basin watershed.

The total nitrogen numeric standards (basin averaging of sites) are being met in all twelve watersheds. Individual sites not meeting standards include Site 13 in the Lake Worth Lagoon North and Sites LWL-8, 18C and 18D in the Lake Worth Lagoon Central.

The total phosphorus numeric standards (basin averaging of sites) are being met for eleven of the twelve watersheds. Only Lake Worth Lagoon Central is not meeting the standard. Individual sites not meeting the standards include Site 22 (C-16 - Lake Osborne) Sites 11 and 13 (Lake Worth Lagoon North) and Sites LWL-8, 18C, 18D and LWL- 11 (Lake Worth Lagoon Central).

The Chl-a criterion (basin averaging of sites) is not being met in four watersheds: the C-15, Loxahatchee River (marine/tidal areas of the North, Northwest, and Southwest Forks), and the watersheds of the Lake Worth Lagoon (North, Central and South).

5.6 Pollutant Loading Analyses

Refer to the Cycle 3, 3rd Year Joint Annual Report for the most recent pollutant loading estimates.

5.7 Program Modifications

Generally, the water quality monitoring data and assessments (annual exceedances, historical statistical data, more recent data, trends) show an improvement in the water quality of the receiving water bodies. Consequently, the stormwater management programs implemented by the permittees, as required by the MS4 permit, appear to be effective.

No program modifications are proposed with this year's report.

Table 5-1
Water Quality Monitoring Site Locations

Watershed	Surface Water Classification	Site Designation	Agency	Marine/ Freshwater	Northing	Easting
C-15	III (Fresh)	31E	ERM	Freshwater	760549.91	916736.89
		31C	ERM	Freshwater	760879.83	943443.02
		31B	ERM	Freshwater	802772.09	964368.10
C-16	III (Fresh)	22	ERM	Freshwater	828280.34	957602.68
		24	ERM	Freshwater	820399.97	957270.70
		27B	ERM	Freshwater	802276.58	916052.08
		27A	ERM	Freshwater	802545.25	942880.04
		28	ERM	Freshwater	760234.13	959303.11
C-17	III (Fresh)	12A	ERM	Freshwater	882520.57	953672.56
		C17S44	SFWMD	Freshwater	903830.19	955552.70
C-18	I (Fresh)	16	ERM	Freshwater	923477.26	902076.42
		15	ERM	Freshwater	901986.07	931378.31
		92	LRD	Freshwater	924685.07	937805.48
		81	LRD	Freshwater	946081.68	935811.57
C-51	III (Fresh)	38B	ERM	Freshwater	854963.27	867962.99
		37B	ERM	Freshwater	853637.29	916592.84
		C51S155	SFWMD	Freshwater	841132.85	964349.43
Lox	III (Fresh)	69	LRD	Freshwater	947071.77	924822.40
	III (Marine)	30	LRD	Marine	961625.76	961625.76
	II (Marine)	51	LRD	Marine	954939.97	948224.55
		62	LRD	Marine	938898.36	961525.58
		72	LRD	Marine	946223.78	954573.37
LWL-N	III (Marine)	LWL-1	ERM	Marine	913398.12	964095.22
		11	ERM	Marine	908969.28	962655.71
		13	ERM	Marine	900706.79	964049.58
		LWL-4	ERM	Marine	898346.67	970040.36
LWL-C	III (Marine)	LWL-8	ERM	Marine	856238.64	968284.93
		18C	ERM	Marine	839740.15	969747.03
		18D	ERM	Marine	835593.23	967942.19
		LWL-11	ERM	Marine	830580.53	967926.64
LWL-S	III (Marine)	LWL-13	ERM	Marine	819086.28	968516.09
		LWL-18	ERM	Marine	798402.11	965585.04
Hillsboro	III (Marine)	1	BC	Marine	724863.71	953909.23
		2	BC	Marine	725864.04	940799.29
	III (Fresh)	3	BC	Freshwater	725348.47	917217.65
		S39	SFWMD	Freshwater	734632.99	888668.58
L-8	III (Fresh)	Culv10	SFWMD	Freshwater	938859.59	778727.09
S-2-6-7	III (Fresh)	S-2	SFWMD	Freshwater	860426.94	748850.27
		39	ERM	Freshwater	855232.20	764581.68
		43	ERM	Freshwater	847294.87	750036.29

Table 5-2
Parameter Collection Schedule

Parameter	ERM		SFWMD	LRD	BC
	Freshwater	Marine			
Alkalinity*	--	--	--	M	
Arsenic	BM	Q	--	--	
Cadmium	BM	Q	--	--	
Chlorophyll-a (corrected)	BM	M	--	M	Q
Copper	BM	Q	--	--	
Dissolved Oxygen	BM	M	M	M	Q
Fecal Coliform	--	--	--	M	
Lead	BM	Q	--	--	
Nitrogen, Ammonia	BM	M	M	M	Q
Nitrogen, Nitrate-Nitrite	BM	M	M	M	Q
Nitrogen, Total Kjeldahl	BM	M	M	M	Q
Nitrogen, Total	BM	M	M	M	Q
pH	BM	M	M	M	Q
Phosphorus, Orthophosphate	BM	M	M	M	
Phosphorus, Total	BM	M	M	M	
Salinity†	--	M	--	M	Q
Specific Conductivity	BM	M	M	M	Q
Temperature	BM	M	M	M	Q
Total Hardness (as CaCO3)*	BM	--	--	--	
Total Suspended Solids*	BM	M	M	M	
Turbidity	BM	M	M	M	Q
Zinc*	BM	Q	--	--	

Notes: 1. Not all parameters are collected for every site.
2. LRD - Loxahatchee River District Sites 62, 69, and 72, are sampled monthly. Sites 30, 51, 69, 81, and 92 bi-monthly.
3. ERM – Palm Beach County Environmental Resource Management
4. SFWMD – South Florida Water Management District
5. BC – Broward County

BM (Bi-Monthly)
M (Monthly)
Q (Quarterly)
-- (Not Sampled)

Table 5-3
Numeric Surface Water Quality Standards by Waterbody

Applicable Class I - Freshwater Canal Peninsula Region Water Quality Criteria C-18 (16, 15, 92, 81)		
PARAMETER	**UNITS**	**CRITERIA**
Arsenic	mg/L	≤ 0.01
Cadmium	mg/L	$\leq [e^{(0.7409\ [lnH]\ -4.719)}]\ 10^{-3}$
Chlorophyll-a (corrected)	ug/L	≤ 20 AGM
Copper	mg/L	$\leq [e^{(0.8545\ [lnH]\ -1.702)}]\ 10^{-3}$
Dissolved Oxygen	% Saturation	> 38
Lead	mg/L	$\leq [e^{(1.273\ (lnH]\ -4.705}]\ 10^{-3}$
Nitrogen, Total	mg/L	≤ 1.54 AGM
pH	None	6.0 to 8.5
Phosphorus, Total	mg/L	≤ 0.12 mg/l AGM
Specific Conductivity	umho/cm	≤ 1275
Turbidity	NTU	≤ 29
Zinc	mg/L	$\leq [e^{(0.8473\ [lnH]\ +\ 0.884)}]\ 10^{-3}$

Applicable Class III - Freshwater Lakes Water Quality Criteria C-16 (22 and 24)		
PARAMETER	**UNITS**	**CRITERIA**
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	$\leq [e^{(0.7409\ [lnH]\ -4.719)}]\ 10^{-3}$
Chlorophyll-a (corrected)	ug/L	≤ 20 AGM
Copper	mg/L	$\leq [e^{(0.8545\ [lnH]\ -1.702)}]\ 10^{-3}$
Dissolved Oxygen	% Saturation	> 38
Lead	mg/L	$\leq [e^{(1.273\ (lnH]\ -4.705}]\ 10^{-3}$
Nitrogen, Total	mg/L	1.27 to 2.23 AGM
pH	None	6.0 to 8.5
Phosphorus, Total	mg/L	0.05 to 0.16 AGM
Specific Conductivity	umho/cm	≤ 1275
Turbidity	NTU	≤ 29
Zinc	mg/L	$\leq [e^{(0.8473\ [lnH]\ +\ 0.884)}]\ 10^{-3}$

Notes:

(1) InH means the natural logarithm of total hardness expressed as milligrams/L of $CaCo_3$.

(2) For Freshwater Lakes the Total Nitrogen and Total Phosphorus Minimum Value applies if Chlorophyll-a is > 20 ug/l, Maximum also applies of Chlorophyll-a is ≤20 ug/l.

(3) AMG - Annual Geometric Mean

Table 5-3
Numeric Surface Water Quality Standards by Waterbody

Applicable Class III - Freshwater Canal South Florida Region Water Quality Criteria C-15 (31E, 31C, 31B), C-16 (27B, 27A, 28), C-17 (12A, C17S44) C-51 (38B, 37B, C51S155), Lox (69), Hillsboro (3, S39) L-8 (Culv10), S-2-6-7 (S-2, 39, 43)		
PARAMETER	**UNITS**	**CRITERIA**
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	$\leq [e^{(0.7409\ [lnH]\ -4.719)}]\ 10^{-3}$
Chlorophyll-a (corrected)	ug/L	≤ 20 AGM
Copper	mg/L	$\leq [e^{(0.8545\ [lnH]\ -1.702)}]\ 10^{-3}$
Dissolved Oxygen	% Saturation	> 38
Lead	mg/L	$\leq [e^{(1.273\ [lnH]\ -4.705)}]\ 10^{-3}$
Nitrogen, Total	mg/L	Narrative
pH	None	6.0 to 8.5
Phosphorus, Total	mg/L	Narrative
Specific Conductivity	umho/cm	≤ 1275
Turbidity	NTU	≤ 29
Zinc	mg/L	$\leq [e^{(0.8473\ [lnH]\ +\ 0.884)}]\ 10^{-3}$

Applicable Class II Marine Water Quality Criteria for North Fork Loxahatchee River (51)		
PARAMETER	**UNITS**	**CRITERIA**
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	≤ 4.0 AGM
Copper	mg/L	≤ 0.0037
Dissolved Oxygen	% Saturation	> 42
Fecal	cfu/100 ml	≤ 43
Lead	mg/L	≤ 0.0085
Nitrogen, Total	mg/L	0.80 AGM
pH	None	6.5 to 8.5
Phosphorus, Total	mg/L	0.030 AGM
Specific Conductivity	umho/cm	None
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ 0.086

Notes:

(1) InH means the natural logarithm of total hardness expressed as milligrams/L of $CaCo_3$.

(2) AMG - Annual Geometric Mean.

(3) Narrative - Shall not cause an imbalance in flora and fauna.

Table 5-3
Numeric Surface Water Quality Standards by Waterbody

Applicable Class II - Marine Water Quality Criteria for Northwest Fork Loxahatchee River (62)		
PARAMETER	**UNITS**	**CRITERIA**
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	≤ 5.5 AGM
Copper	mg/L	≤ 0.0037
Dissolved Oxygen	% Saturation	> 42
Fecal	cfu/100 ml	≤ 43
Lead	mg/L	≤ 0.0085
Nitrogen, Total	mg/L	< 1.26 AGM
pH	None	6.5 to 8.5
Phosphorus, Total	mg/L	< 0.075 AGM
Specific Conductivity	umho/cm	None
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ 0.086

Applicable Class II - Marine Water Quality Criteria for Southwest Fork Loxahatchee River (72)		
PARAMETER	**UNITS**	**CRITERIA**
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	≤ 5.5 AGM
Copper	mg/L	≤ 0.0037
Dissolved Oxygen	% Saturation	> 42
Fecal	cfu/100 ml	≤ 43
Lead	mg/L	≤ 0.0085
Nitrogen, Total	mg/L	≤ 1.26 AGM
pH	None	6.5 to 8.5
Phosphorus, Total	mg/L	≤ 0.075 AGM
Specific Conductivity	umho/cm	None
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ 0.086

Notes:
(1) AGM - Annual Geometric Mean

Table 5-3
Numeric Surface Water Quality Standards by Waterbody

Applicable Class III - Marine Water Quality Criteria Hillsboro (1 and 2)		
PARAMETER	**UNITS**	**CRITERIA**
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	≤ 11 AGM
Copper	mg/L	≤ 0.0037
Dissolved Oxygen	% Saturation	> 42
Lead	mg/L	≤ 0.0085
Nitrogen, Total	mg/L	Narrative
pH	None	6.5 to 8.5
Phosphorus, Total	mg/L	Narrative
Specific Conductivity	umho/cm	None
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ 0.086

Applicable Class III - Marine Water Quality Criteria ICWW South of Loxahatchee River (30)		
PARAMETER	**UNITS**	**CRITERIA**
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	≤ 4.7 AGM
Copper	mg/L	<0.0037
Dissolved Oxygen	% Saturation	> 42
Enterococci Bacteria	cfu/100mL	≤ 130 Count TPTV
Lead	mg/L	≤ 0.0085
Nitrogen, Total	mg/L	≤ 0.66 AGM
pH	None	6.5 to 8.5
Phosphorus, Total	mg/L	≤ 0.035 AGM
Specific Conductivity	umho/cm	None
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ 0.086

Notes:
(1) AGM - Annual Geometric Mean
(2) TPTV - Ten Percent Threshold Value shall not be exceeded in more than 10% of the measurement
(3) Narrative - Shall not cause an imbalance in flora and fauna

Table 5-3
Numeric Surface Water Quality Standards by Waterbody

Applicable Class III - Marine Water Quality Criteria Lake Worth Lagoon North (LWL-1, 11, 13, LWL-4)		
PARAMETER	**UNITS**	**CRITERIA**
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	≤ 2.9 AGM
Copper	mg/L	≤ 0.0037
Dissolved Oxygen	% Saturation	> 42
Lead	mg/L	≤ 0.0085
Nitrogen, Total	mg/L	≤ 0.54 AGM
pH	None	6.5 to 8.5
Phosphorus, Total	mg/L	≤ 0.044 AGM
Specific Conductivity	umho/cm	None
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ 0.086

Applicable Class III - Marine Water Quality Criteria Lake Worth Lagoon Central (LWL-8, 18C, 18D, LWL-11)		
PARAMETER	**UNITS**	**CRITERIA**
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	≤ 10.2 TPTV
Copper	mg/L	≤ 0.0037
Dissolved Oxygen	% Saturation	> 42
Lead	mg/L	≤ 0.0085
Nitrogen, Total	mg/L	≤ 0.66 AGM
pH	None	6.5 to 8.5
Phosphorus, Total	mg/L	≤ 0.049 AGM
Specific Conductivity	umho/cm	None
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ 0.086

Notes:
(1) AGM - Annual Geometric Mean
(2) TPTV - Ten Percent Threshold Value shall not be exceeded in more than 10% of the measurement

Table 5-3
Numeric Surface Water Quality Standards by Waterbody

Applicable Class III - Marine Lake Worth Lagoon South (LWL-13 and LWL-18)		
PARAMETER	**UNITS**	**CRITERIA**
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	≤ 5.7 AGM
Copper	mg/L	≤ 0.0037
Dissolved Oxygen	% Saturation	> 42
Lead	mg/L	≤ 0.0085
Nitrogen, Total	mg/L	≤ 0.59 AGM
pH	None	6.5 to 8.5
Phosphorus, Total	mg/L	≤ 0.050 AGM
Specific Conductivity	umho/cm	None
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ 0.086

Notes:
(1) AGM - Annual Geometric Mean

Table 5-3
Numeric Surface Water Quality Standards
Relationship of Heavy Metal Limits to Hardness
(Page 7 of 7)

		Maximum Numeric Criteria for Various Hardness Values (mg/L of $CaCO_3$)						
metal	**unit**	**50**	**100**	**150**	**200**	**250**	**300**	**350**
cadmium	**mg/l**	0.000162	0.000271	0.000365	0.000452	0.000534	0.000611	0.000685
copper	**mg/l**	0.005159	0.009329	0.013192	0.016868	0.020411	0.023852	0.027211
lead	**mg/l**	0.001317	0.003182	0.005331	0.007689	0.010215	0.012883	0.015676
zinc	**mg/l**	0.003372	0.003576	0.003701	0.003792	0.003865	0.003925	0.003976

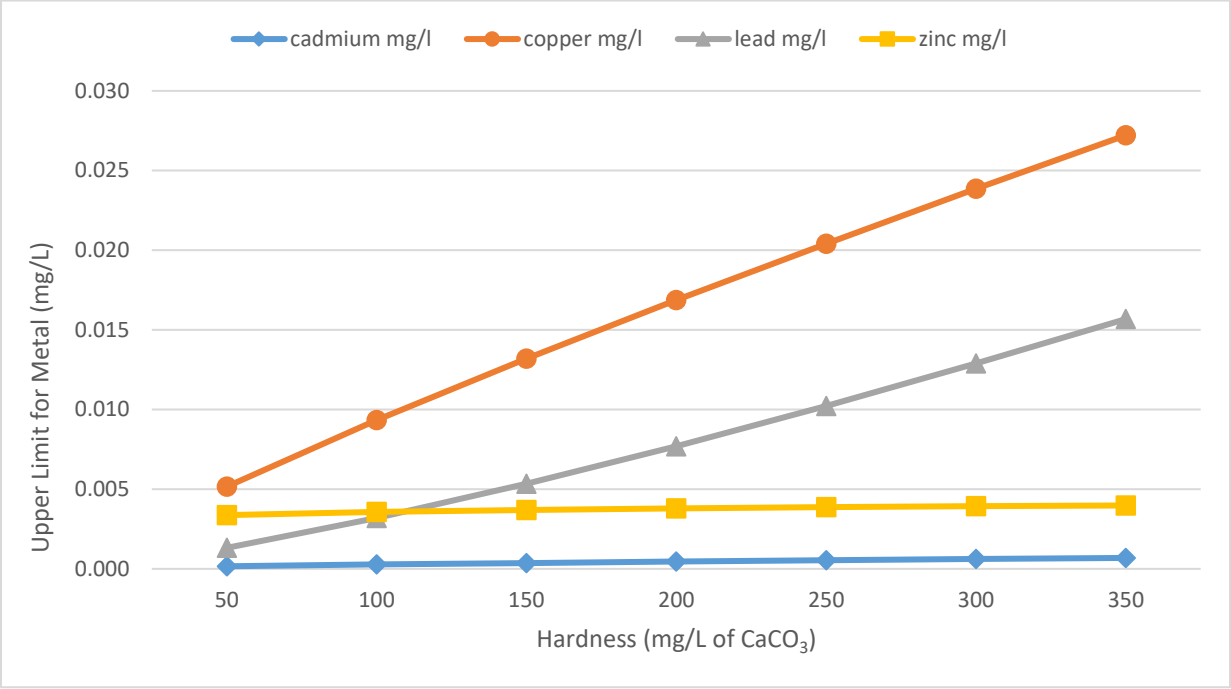


Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

C-15 Watershed Monitoring Events									
SITE 31E	**SAMPLE DATE**	**1/17/18**	**4/4/18**	**8/2/18**	**9/27/18**			**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	167							
Arsenic	mg/L	0.0007	0.0025	0.0071	0.0071				≤ 0.05
Cadmium	mg/L	0.0001	0.0003	0.0003	0.0003				See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L	10.2	3.8	55.5	21			14.6	≤ 20 AGM
Copper	mg/L	0.0054	0.0013	0.0037	0.0026				See Table 5-3, page 7
Dissolved Oxygen	% Saturation	85.0	59.2	17.2	36.8				> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L	0.0007	0.0025	0.0046	0.0046				See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.023	0.035	0.079	0.075				
Nitrogen, nitrate + nitrite	mg/L		0.013	0.025	0.046				
Nitrogen, Total	mg/L	1.04	0.92	2.03	1.05			1.19	Narrative
Nitrogen, Total Kjeldahl	mg/L	1.04	0.91	2	1				
pH	None	8.79	7.43	7.55	7.63				6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.1050	0.029	0.300	0.11				
Phosphorus, Total	mg/L	0.1470	0.0500	0.4600	0.18			0.157	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	492	321.3	554	503				≤ 1275
Temperature	deg C	19.6	26.4	29.6	30.2				
Total Hardness	mg/L	169	98.7	193	210				
Total Suspended Solids	mg/L	7.8	2.5	11.0	5				
Turbidity	NTU	8.5	1.8	4.8	5.1				≤ 29
Zinc	mg/L	0.0038	0.0100	0.0110	0.0110				See Table 5-3, page 7

• Metal exceedences are based on hardness

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

•AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

C-15 Watershed Monitoring Events									
SITE 31C	**SAMPLE DATE**	**1/17/18**	**4/4/18**	**8/2/18**	**9/27/18**			**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	188							
Arsenic	mg/L	0.0007	0.0025	0.0071	0.0071				≤ 0.05
Cadmium	mg/L	0.0001	0.0003	0.0003	0.0003				See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L		1.1	58.0	14			9.6	≤ 20 AGM
Copper	mg/L	0.0003	0.0013	0.0043	0.0026				See Table 5-3, page 7
Dissolved Oxygen	% Saturation	44.4	90.3	137.5	84.3				> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L	0.0007	0.0025	0.0046	0.0046				See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.202	0.018	0.035	0.041				
Nitrogen, nitrate + nitrite	mg/L		0.013	0.025	0.06				
Nitrogen, Total	mg/L	0.98	0.76	1.53	0.88			1.00	Narrative
Nitrogen, Total Kjeldahl	mg/L	0.977	0.75	1.5	0.82				
pH	None	8.48	7.74	7.85	7.67				6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0874	0.061	0.067	..07				
Phosphorus, Total	mg/L	0.109	0.094	0.160	0.110			0.116	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	524	523	514	494.8				≤ 1275
Temperature	deg C	22.1	26.6	30.3	30.6				
Total Hardness	mg/L	186		177	225				
Total Suspended Solids	mg/L								
Turbidity	NTU	1.8	1.5	4.9	3.3				≤ 29
Zinc	mg/L	0.0163	0.0100	0.0110	0.0110				See Table 5-3, page 7

• Metal exceedences are based on hardness

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

•AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

C-15 Watershed Monitoring Events									
SITE 31B	**SAMPLE DATE**	**01/17/18**	**04/04/18**	**08/02/18**	**09/27/18**			**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	195							
Arsenic	mg/L	0.000745	0.0025	0.0070	0.0070				≤ 0.05
Cadmium	mg/L	0.000065	0.0003	0.0003	0.0003				See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L	13.1	34.2	13.9	12.9			16.84	≤ 20 AGM
Copper	mg/L	0.00293	0.0031	0.0038	0.0027				See Table 5-3, page 7
Dissolved Oxygen	% Saturation	116.1	108	104.6	83.4				> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L	0.0007	0.0025	0.0046	0.0046				See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.007	0.018	0.035	0.035				
Nitrogen, nitrate + nitrite	mg/L		0.013	0.025	0.025				
Nitrogen, Total	mg/L	0.78	0.87	1.23	0.87			0.92	Narrative
Nitrogen, Total Kjeldahl	mg/L	0.776	0.86	1.20	0.84				
pH	None	9.1	8.4	7.8	7.9				6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.055	0.011	0.068	0.130				
Phosphorus, Total	mg/L	0.0953							Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	533	508	504	484.3				≤ 1275
Temperature	deg C	19.6	25.1	29.9	30.4				
Total Hardness	mg/L	198		170	212				
Total Suspended Solids	mg/L	3.0	2.5	5.5	5.0				
Turbidity	NTU	2.1	3	3.8	3.2				≤ 29
Zinc	mg/L	0.00677	0.0050	0.0110	0.0110				See Table 5-3, page 7

• Metal exceedences are based on hardness

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

•AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

C-16 Watershed Monitoring Events									
SITE 22	**SAMPLE DATE**	**3/8/18**	**7/20/18**	**9/25/18**				**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L	0.0050	0.0071	0.0071					≤ 0.05
Cadmium	mg/L	0.0005	0.0003	0.0003					See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L	14.4	3.2	18.7				9.5	≤ 20 AGM
Copper	mg/L	0.0025	0.0026	0.0026					See Table 5-3, page 7
Dissolved Oxygen	% Saturation	110.0	129.4	130.3					> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L	0.0050	0.0046	0.0046					See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.035	0.035	0.035					
Nitrogen, nitrate + nitrite	mg/L	0.025	0.025	0.025					
Nitrogen, Total	mg/L	1.13	1.13	1.13				1.13	≤ 2.23 AGM
Nitrogen, Total Kjeldahl	mg/L	1.10	1.10	1.1					
pH	None		8.4	8.5					6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0180	0.010	0.0095					
Phosphorus, Total	mg/L	0.064	0.079	0.080				0.074	≤ 0.16 AGM
Salinity	ppth								
Specific Conductivity	umho/cm	522	447	429.9					≤ 1275
Temperature	deg C	22.1	32.2	31.3					
Total Hardness	mg/L	194	172	161					
Total Suspended Solids	mg/L	5.0	5.0	6					
Turbidity	NTU	4.4	4.6	6.2					≤ 29
Zinc	mg/L	0.0100	0.0110	0.0110					See Table 5-3, page 7

• Metal exceedences are based on hardness

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

C-16 Watershed Monitoring Events									
SITE 24	**SAMPLE DATE**	**3/8/18**	**7/20/18**	**9/25/18**				**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L	0.005	0.0071	0.0071					≤ 0.05
Cadmium	mg/L	0.0005	0.0004	0.0003					See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L	2.2	2.2	19.9				4.6	≤ 20 AGM
Copper	mg/L	0.0025	0.0026	0.0026					See Table 5-3, page 7
Dissolved Oxygen	% Saturation	94.2	96.2	123.8					> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L	0.0050	0.0046	0.0046					See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.035	0.035						
Nitrogen, nitrate + nitrite	mg/L	0.025	0.025	0.025					
Nitrogen, Total	mg/L	0.95	0.93	0.84				0.90	≤ 2.23 AGM
Nitrogen, Total Kjeldahl	mg/L	0.92	0.9	0.81					
pH	None		8.0	8.2					6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0230	0.033	0.015					
Phosphorus, Total	mg/L	0.057	0.070	0.058				0.061	≤ 0.16 AGM
Salinity	ppth								
Specific Conductivity	umho/cm	459	488	454.3					≤ 1275
Temperature	deg C	21.6	32.2	32.2					
Total Hardness	mg/L	184	184	173					
Total Suspended Solids	mg/L	5.0	5.0	5					
Turbidity	NTU	4.00	2.80	3.80					≤ 29
Zinc	mg/L	0.0100	0.0110	0.0110					See Table 5-3, page 7

• Metal exceedences are based on hardness

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

C-16 Watershed Monitoring Events									
SITE 27B	**SAMPLE DATE**	**1/17/18**	**4/4/18**	**9/27/18**				**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	203							
Arsenic	mg/L	0.0007	0.0050	0.0071					≤ 0.05
Cadmium	mg/L	0.0001	0.0003	0.0003					See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L	0.5	6.6	11.8				3.4	≤ 20 AGM
Copper	mg/L	0.0032	0.0013	0.0026					See Table 5-3, page 7
Dissolved Oxygen	% Saturation	51.6	49.00	26.6					> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L	0.0007	0.0025	0.0046					See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.153							
Nitrogen, nitrate + nitrite	mg/L	0.047	0.260	0.025					
Nitrogen, Total	mg/L	1.41	1.26	1.23				1.29	Narrative
Nitrogen, Total Kjeldahl	mg/L	1.36	1	1.2					
pH	None	8.68	7.51	7.56					6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.1640	0.0760	0.0620					
Phosphorus, Total	mg/L	0.215	0.110	0.110				0.138	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	522	769	725					≤ 1275
Temperature	deg C	19.0	25.7	30.1					
Total Hardness	mg/L	192	205	245					
Total Suspended Solids	mg/L	8.7	7.0	5.0					
Turbidity	NTU	6.3	5.9	2.6					≤ 29
Zinc	mg/L	0.0053	0.0050	0.0110					See Table 5-3, page 7

• Metal exceedences are based on hardness

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

C-16 Watershed Monitoring Events									
SITE 27A	**SAMPLE DATE**	**1/17/18**	**4/4/18**	**8/2/18**	**9/27/18**			**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	130							
Arsenic	mg/L	0.0025	0.0071	0.0071	0.0071				≤ 0.05
Cadmium	mg/L	0.0001	0.0003	0.0003	0.0003				See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L		14.0	16.5	5.5			10.8	≤ 20 AGM
Copper	mg/L	0.0019	0.0013	0.0027	0.0034				See Table 5-3, page 7
Dissolved Oxygen	% Saturation	86.4	96.4	82.8	89.0				> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L	0.0007	0.0050	0.0046	0.0046				See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.029	0.018	0.035	0.035				
Nitrogen, nitrate + nitrite	mg/L	0.025	0.013	0.025	0.025				
Nitrogen, Total	mg/L	0.02	0.87	1.13	0.97			0.39	Narrative
Nitrogen, Total Kjeldahl	mg/L		0.86	1.10	0.94				
pH	None	8.99	7.99	7.94	8.12				6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0290	0.0190	0.0900	0.044				
Phosphorus, Total	mg/L	0.041	0.049	0.003	0.081			0.026	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	398	600	537	396.6				≤ 1275
Temperature	deg C	18.8	26.4	31.4	30.4				
Total Hardness	mg/L	125	196	165	171				
Total Suspended Solids	mg/L	0.5	2.5	5.0	5				
Turbidity	NTU	0.9	1.6	1.1	4.6				≤ 29
Zinc	mg/L	0.0050	0.0110	0.0110	0.0110				See Table 5-3, page 7

• Metal exceedences are based on hardness

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

C-16 Watershed Monitoring Events									
SITE 28	**SAMPLE DATE**	**4/4/18**	**8/2/18**	**9/27/18**				**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L	0.00025	0.0071	0.0071					≤ 0.05
Cadmium	mg/L	0.00025	0.0003	0.0003					See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L	9.8	34.3	26.3				20.7	≤ 20 AGM
Copper	mg/L	0.00125	0.0026	0.0026					See Table 5-3, page 7
Dissolved Oxygen	% Saturation	104.2	105.2	63.8					> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L	0.0025	0.0046	0.0046					See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.018	0.035	0.035					
Nitrogen, nitrate + nitrite	mg/L	0.013	0.035	0.035					
Nitrogen, Total	mg/L	0.69	0.94	0.79				0.80	Narrative
Nitrogen, Total Kjeldahl	mg/L	0.68	0.90	0.75					
pH	None	8.2	8.1	7.7					6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.016	0.019	0.055					
Phosphorus, Total	mg/L	0.0450	0.0910	0.1100				0.077	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	516	455	472.5					≤ 1275
Temperature	deg C	25.4	30.2	30.1					
Total Hardness	mg/L	184	211	161					
Total Suspended Solids	mg/L	2.5	1..5	5.0					
Turbidity	NTU	1.5	3.5	2.8					≤ 29
Zinc	mg/L	0.005	0.0110	0.0110					See Table 5-3, page 7

• Metal exceedences are based on hardness

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AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

C-17 Watershed Monitoring Events									
SITE 12A	**SAMPLE DATE**	**1/16/18**	**3/8/18**	**7/20/18**	**9/25/18**			**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	186							
Arsenic	mg/L	0.0007	0.0050	0.0071	0.0071				≤ 0.05
Cadmium	mg/L	0.0001	0.0005	0.0003	0.0003				See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L	12.4	2.2	2.2	21.3			6.0	≤ 20 AGM
Copper	mg/L	0.0034	0.0025	0.0026	0.0026				See Table 5-3, page 7
Dissolved Oxygen	% Saturation	83.9	96.2	50.9	65.6				> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L	0.0007	0.0050	0.0046	0.0046				See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.053							
Nitrogen, nitrate + nitrite	mg/L		0.025	0.064	0.025				
Nitrogen, Total	mg/L	0.81	1.03	1.16	0.03			0.39	Narrative
Nitrogen, Total Kjeldahl	mg/L	0.81	1.00	1.10					
pH	None	9.44		7.57	7.52				6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0034	0.008	0.029	0.013				
Phosphorus, Total	mg/L	0.044	0.056	0.090	0.071			0.063	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	575	450.4	450	463.1				≤ 1275
Temperature	deg C	19.0	20.5	30.5	30.0				
Total Hardness	mg/L	168	175	165	170				
Total Suspended Solids	mg/L	5.2	5.0	5.0	5.0				
Turbidity	NTU	4.3	4.6	2.6	3.6				≤ 29
Zinc	mg/L	0.0035	0.0100	0.0110	0.0110				See Table 5-3, page 7

• Metal exceedences are based on hardness

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

C-17 Watershed Monitoring Events									
SITE C17S44	**SAMPLE DATE**	**10/12/17**	**11/16/17**	**12/13/17**	**1/11/18**	**2/8/18**	**3/15/18**	**4/12/18**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L								≤ 20 AGM
Copper	mg/L								See Table 5-3, page 7
Dissolved Oxygen	% Saturation	64.06	66.06	61.21	86.56	98.57	80.52	82.95	> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L								See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.077	0.121	0.122	0.05	0.025	0.02	0.009	
Nitrogen, nitrate + nitrite	mg/L	0.076	0.232	0.233	0.178	0.047	0.007	0.002	
Nitrogen, Total	mg/L	1.02	1.05	1.03	0.913	0.724	0.734	0.748	Narrative
Nitrogen, Total Kjeldahl	mg/L								
pH	None	7.5	7.6	7.8	7.6	8.1	7.9	8	6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.024	0.025	0.025	0.014	0.004	0.007	0.002	
Phosphorus, Total	mg/L	0.11	0.063	0.05	0.047	0.029	0.041	0.03	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	342	503	500	502	518	498	486	≤ 1275
Temperature	deg C	28.1	24.7	18.9	19.6	22.7	20.2	26	
Total Hardness	mg/L								
Total Suspended Solids	mg/L	20	4	1.5	4	1.5	1.5	1.5	
Turbidity	NTU	8.2	2.8	1.7	1.6	1	1.1	1.7	≤ 29
Zinc	mg/L								See Table 5-3, page 7

SITE C17S44	**SAMPLE DATE**	**5/10/18**	**6/14/18**	**7/12/18**	**8/9/18**	**9/13/18**		**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L								≤ 20 AGM
Copper	mg/L								See Table 5-3, page 7
Dissolved Oxygen	% Saturation	73.79	62.45	47.49	68.38	27.81			> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L								See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.005	0.071	0.042	0.02	0.08			
Nitrogen, nitrate + nitrite	mg/L	0.002	0.173	0.023	0.013	0.051			
Nitrogen, Total	mg/L	0.706	0.98	0.761	0.829	0.874		0.86	Narrative
Nitrogen, Total Kjeldahl	mg/L								
pH	None	7.6	7.4	7.4	7.5	7.4			6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.003	0.046	0.017	0.009	0.015			
Phosphorus, Total	mg/L	0.029	0.098	0.056	0.058	0.059		0.051	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	434	486	451	450	440			≤ 1275
Temperature	deg C	27.5	27.9	30.4	32.1	29.7			
Total Hardness	mg/L								
Total Suspended Solids	mg/L	1.5	3	1.5	1.5	1.5			
Turbidity	NTU	1.2	2.1	1.1	1.7	1.2			≤ 29
Zinc	mg/L								See Table 5-3, page 7

• Metal exceedences are based on hardness

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

C-18 Watershed Monitoring Events									
SITE 16	**SAMPLE DATE**	**1/16/18**	**3/8/18**	**7/20/18**	**9/25/18**			**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	159							
Arsenic	mg/L	0.0007	0.0050	0.0071	0.0071				≤ 0.01
Cadmium	mg/L	0.0001	0.0005	0.0003	0.0003				See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L		2.2	3.5	2.2			2.6	≤ 20 AGM
Copper	mg/L	0.0003	0.0025	0.0026	0.0026				See Table 5-3, page 7
Dissolved Oxygen	% Saturation	47.3	63.3	35.9	34.0				> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L	0.0007	0.0050	0.0046	0.0046				See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.090	0.035	0.049	0.035				
Nitrogen, nitrate + nitrite	mg/L	0.046	0.032	0.025	0.041				
Nitrogen, Total	mg/L	1.25	0.99	1.23	0.90			1.08	≤ 1.54 AGM
Nitrogen, Total Kjeldahl	mg/L	1.20	0.96	1.20	0.86				
pH	None	8.85		7.48	7.38				6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0015	0.01	0.008	0.01				
Phosphorus, Total	mg/L	0.019	0.024	0.034	0.021			0.024	≤ 0.12 mg/l AGM
Salinity	ppth								
Specific Conductivity	umho/cm	397	406	168	239.3				≤ 1275
Temperature	deg C	18.6	21.2	31.1	28.4				
Total Hardness	mg/L	137	204	66.9	97.6				
Total Suspended Solids	mg/L	1.3	5.0	5	5				
Turbidity	NTU	1.3	0.8	2.1	1.4				≤ 29
Zinc	mg/L	0.0015	0.0100	0.0110	0.0110				See Table 5-3, page 7

• Metal exceedences are based on hardness

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

C-18 Watershed Monitoring Events									
SITE 15	**SAMPLE DATE**	**1/16/18**	**3/8/18**	**7/20/18**	**9/25/18**			**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	87.8000							
Arsenic	mg/L	0.0015	0.0050	0.0071	0.0071				≤ 0.01
Cadmium	mg/L	0.0001	0.0005	0.0003	0.0003				See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L		2.7000	2.9	2.2			2.6	≤ 20 AGM
Copper	mg/L	0.00	0.00	0.0026	0.0026				See Table 5-3, page 7
Dissolved Oxygen	% Saturation	41.9000	42.7000	27.5	49.3				> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L	0.0007	0.0050	0.0046	0.0046				See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.1860	0.1200	0.035	0.035				
Nitrogen, nitrate + nitrite	mg/L	0.0095	0.0250	0.03	0.029				
Nitrogen, Total	mg/L	0.0095	0.7950	0.9350	0.7590			0.27	≤ 1.54 AGM
Nitrogen, Total Kjeldahl	mg/L		0.7700	0.91	0.73				
pH	None	9.44		8.0	7.1				6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0015	0.0051	0.007	0.004				
Phosphorus, Total	mg/L	0.0058	0.0120	0.007	0.010			0.008	≤ 0.12 mg/l AGM
Salinity	ppth								
Specific Conductivity	umho/cm	269	307	217	161.7				≤ 1275
Temperature	deg C	17.20	20.20	29.2	28.9				
Total Hardness	mg/L	80.7	120.0	83.5	60.3				
Total Suspended Solids	mg/L	0.5000	5.0000	5.0	5.0				
Turbidity	NTU	0.5000	4.4000	0.7	0.58				≤ 29
Zinc	mg/L	0.0021	0.0100	0.0110	0.011				See Table 5-3, page 7

• Metal exceedences are based on hardness

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

C-18 Watershed Monitoring Events									
Site 92	**SAMPLE DATE**	**12/11/17**	**2/12/18**	**5/14/18**	**8/13/18**			**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	247	245	172	103				
Arsenic	mg/L								≤ 0.01
Cadmium	mg/L								See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L	1.3	3.5	3.6	5.6			3.1	≤ 20 AGM
Copper	mg/L								See Table 5-3, page 7
Dissolved Oxygen	% Saturation	56.20	57.60	68.10	50.70				> 38
Lead	mg/L								See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.130	0.210	0.070	0.060				
Nitrogen, nitrate + nitrite	mg/L	0.409	0.231	0.025	0.053				
Nitrogen, Total	mg/L	1.609	1.331	0.725	1.053			1.13	≤ 1.54 AGM
Nitrogen, Total Kjeldahl	mg/L			0.7	1				
pH	None	7.26	7.53	7.68	6.93				6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.020	0.014	0.035	0.010				
Phosphorus, Total	mg/L	0.097	0.048	0.057	0.044			0.058	≤ 0.12 mg/l AGM
Salinity	ppth	0.4	0.4	0.2	0.2				
Specific Conductivity	umho/cm	790	799	459	322				≤ 1275
Temperature	deg C			25.3	29.0				
Total Hardness	mg/L								
Total Suspended Solids	mg/L	2.8	3.4	2.6	2.5				
Turbidity	NTU	6.2	6.9	6.5	3.9				≤ 29
Zinc	mg/L								See Table 5-3, page 7

• Metal exceedences are based on hardness

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

C-18 Watershed Monitoring Events									
Site 81	**SAMPLE DATE**	**12/11/17**	**3/12/18**	**6/11/18**	**9/10/18**			**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	90	173	2	74				
Arsenic	mg/L								≤ 0.01
Cadmium	mg/L								See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L	3.2	3.0	6.1	15.8			5.5	≤ 20 AGM
Copper	mg/L								See Table 5-3, page 7
Dissolved Oxygen	% Saturation	67.90	98.60	91.70	68.50				> 38
Lead	mg/L								See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.120	0.060	0.070	0.050				
Nitrogen, nitrate + nitrite	mg/L	0.055	0.006	0.012	0.040				
Nitrogen, Total	mg/L	0.955	0.806	0.900	0.700			0.83	≤ 1.54 AGM
Nitrogen, Total Kjeldahl	mg/L			0.9	0.7				
pH	None	7.41	7.82	7.74	6.95				6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.005	0.005	0.005	0.005				
Phosphorus, Total	mg/L	0.027	0.030	0.033	0.030			0.030	≤ 0.12 mg/l AGM
Salinity	ppth	0.1	0.25	1	0.1				
Specific Conductivity	umho/cm								≤ 1275
Temperature	deg C			27.7	30.1				
Total Hardness	mg/L								
Total Suspended Solids	mg/L	1.4	1.0	1.9	1.8				
Turbidity	NTU	1.3	1.0	1.8	1.5				≤ 29
Zinc	mg/L								See Table 5-3, page 7

• Metal exceedences are based on hardness

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

C-51 Watershed Monitoring Events									
SITE 38B	**SAMPLE DATE**	**1/16/18**	**3/14/18**	**5/17/18**	**7/27/18**	**9/28/18**		**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	177							
Arsenic	mg/L	0.0007		0.0054	0.0071	0.0071		0.0038	≤ 0.05
Cadmium	mg/L	0.0001		0.0005	0.0003	0.0003		0.0003	See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L	4.8	4.2	4.5	6.7	2.2		4.2	≤ 20 AGM
Copper	mg/L	0.0018		0.0025	0.0026	0.0026		0.0023	See Table 5-3, page 7
Dissolved Oxygen	% Saturation	92.4	92.2	38.6	33.0	31.6		50.9	> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L	0.0007		0.0050	0.0046	0.0046		0.0029	See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.040	0.046	0.640	0.250	0.390		0.163	
Nitrogen, nitrate + nitrite	mg/L	0.503	0.49	1.400	0.180	0.190		0.4115	
Nitrogen, Total	mg/L	1.62	1.69	4.70	2.08	1.99		2.22	Narrative
Nitrogen, Total Kjeldahl	mg/L	1.12	1.20	3.3	1.9	1.8		1.72	
pH	None	8.95		7.23	7.57	7.62		7.82	6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.036	0.080	0.180	0.110	0.074		0.084	
Phosphorus, Total	mg/L	0.1260	0.1800	0.2700	0.1400	0.1200		0.159	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	859	598					716.7	≤ 1275
Temperature	deg C	18.4	19.8	26.4	30.1	29.2		24.3	
Total Hardness	mg/L	261		351	236	294		282	
Total Suspended Solids	mg/L	19.7	30.5	60.0	17.0	9.0		22.3	
Turbidity	NTU	30.0	46.4	38.3	7.1	7.6		19.58	≤ 29
Zinc	mg/L	0.0065		0.0100	0.0110	0.0110		0.0094	See Table 5-3, page 7

• Metal exceedences are based on hardness

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

C-51 Watershed Monitoring Events									
SITE 37B	**SAMPLE DATE**	**1/16/18**	**3/14/18**	**7/27/18**	**9/28/18**			**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	201							
Arsenic	mg/L	0.0007		0.0071	0.0071				≤ 0.05
Cadmium	mg/L	0.0001		0.0003	0.0003				See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L	6.2	3.5	5.7	5			5.0	≤ 20 AGM
Copper	mg/L	0.0025		0.0026	0.0026				See Table 5-3, page 7
Dissolved Oxygen	% Saturation	90.9	76.9	37.7	31.0				> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L	0.0007		0.0046	0.0046				See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.036	0.083	0.190	0.27				
Nitrogen, nitrate + nitrite	mg/L	0.290	0.430	0.340	0.36				
Nitrogen, Total	mg/L	1.36	1.42	2.04	1.86			1.65	Narrative
Nitrogen, Total Kjeldahl	mg/L	1.07	0.99	1.70	1.5				
pH	None	9.60		7.50	7.53				6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0171	0.069	0.087	0.088				
Phosphorus, Total	mg/L		0.1200	0.1100	0.096			0.108	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	791	712	865	965				≤ 1275
Temperature	deg C	18.8	20.6	30.5	29.4				
Total Hardness	mg/L	269		277	296				
Total Suspended Solids	mg/L	17.3	11.0	12.5	5.0				
Turbidity	NTU	19.0	17.0	10.4	2.7				≤ 29
Zinc	mg/L	0.0035		0.0110	0.0110				See Table 5-3, page 7

• Metal exceedences are based on hardness

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

C-51 Watershed Monitoring Events									
SITE C51S155	**SAMPLE DATE**	**10/12/17**	**11/16/17**	**12/13/17**	**1/11/18**	**2/8/18**	**3/15/18**	**4/12/18**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L								≤ 20 AGM
Copper	mg/L								See Table 5-3, page 7
Dissolved Oxygen	% Saturation	42.88	59.32	62.51	71.43	84.80	80.52	83.54	> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L								See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.262	0.082	0.099	0.073	0.054	0.041	0.013	
Nitrogen, nitrate + nitrite	mg/L	0.424	0.34	0.374	0.319	0.358	0.431	0.015	
Nitrogen, Total	mg/L	1.92	1.23	1.37	1.42	1.28	1.42	1.07	Narrative
Nitrogen, Total Kjeldahl	mg/L								
pH	None	7	7.3	7.9	7.1	7.8	7.8	8	6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.065	0.033	0.043	0.033	0.031	0.062	0.018	
Phosphorus, Total	mg/L	0.101	0.063	0.073	0.061	0.07	0.129	0.079	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	691	711	733	884	784	699	956	≤ 1275
Temperature	deg C	28.5	24.9	19.3	18.9	21.9	20.1	25.9	
Total Hardness	mg/L								
Total Suspended Solids	mg/L	4	6	1.5	6	3	7	6	
Turbidity	NTU	5	4.7	3.4	3.2	4.9	17.7	4.5	≤ 29
Zinc	mg/L								See Table 5-3, page 7

SITE C51S155	**SAMPLE DATE**	**5/10/18**	**6/14/18**	**7/12/18**	**8/9/18**	**9/13/18**		**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L								≤ 20 AGM
Copper	mg/L								See Table 5-3, page 7
Dissolved Oxygen	% Saturation	83.64	53.70	47.97	39.64			60.1	> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L								See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.023	0.126	0.118	0.095			0.070	
Nitrogen, nitrate + nitrite	mg/L	0.047	0.245	0.337	0.224			0.21	
Nitrogen, Total	mg/L	1.12	1.43	1.56	1.26			1.34	Narrative
Nitrogen, Total Kjeldahl	mg/L								
pH	None	7.7	7.3	7.2	7.6			7.5	6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.018	0.074	0.055	0.002			0.030	
Phosphorus, Total	mg/L	0.081	0.125	0.107	0.091			0.085	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	1320	635	642	556			741	≤ 1275
Temperature	deg C	27.4	27.8	30.3	31.4			25.1	
Total Hardness	mg/L								
Total Suspended Solids	mg/L	6	8	7	4			4.8	
Turbidity	NTU	5.7	6.2	5.4	4			4.9	≤ 29
Zinc	mg/L								See Table 5-3, page 7

• Metal exceedences are based on hardness

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Loxahatchee River Watershed Monitoring Events									
SITE 69 (Lox)	**SAMPLE DATE**	**10/9/17**	**11/14/17**	**12/11/17**	**1/15/18**	**2/12/18**	**3/12/18**	**4/9/18**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	122	167	183	194	201	223	150	
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L	5.4	2.6	4.8	4.6	1.6	1.2	2.0	≤ 20 AGM
Copper	mg/L								See Table 5-3, page 7
Dissolved Oxygen	% Saturation	12	42.2	55.8	67.3	58.8	69.6	66.10	> 38
Fecal Coliform	cfu/100mL	467	135	327	64	31	41	20	
Lead	mg/L								See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.220	0.150	0.180	0.070	0.130	0.060	0.050	
Nitrogen, nitrate + nitrite	mg/L	0.017	0.175	0.262	0.239	0.120	0.039	0.017	
Nitrogen, Total	mg/L	1.42	1.18	1.16	0.84	1.22	0.84	0.80	Narrative
Nitrogen, Total Kjeldahl	mg/L	1.4	1						
pH	None	6.7	7.1	7.2	6.8	7.7	7.2	7.8	6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.104	0.044	0.026	0.017	0.016	0.014	0.010	
Phosphorus, Total	mg/L	0.246	0.106	0.091	0.038	0.073	0.027	0.033	Narrative
Salinity	ppth	0.20	0.30	0.30	0.30	0.30	0.30	0.30	
Specific Conductivity	umho/cm	388	542	640	640	644	682	541	≤ 1275
Temperature	deg C	28.3	24.4						
Total Hardness	mg/L								
Total Suspended Solids	mg/L	2.0	21.8	11.3	0.8	4.9	0.5	2.4	
Turbidity	NTU	4.1	14.9	8.9	2.5	3.4	1.4	2.4	≤ 29
Zinc	mg/L								See Table 5-3, page 7

SITE 69 (Lox)	**SAMPLE DATE**	**5/14/18**	**6/11/18**	**7/9/18**	**8/13/18**	**9/10/18**		**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	182	148	107	125	104			
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L	2.5	3.7	4.0	6.2	6.0		3.3	≤ 20 AGM
Copper	mg/L								See Table 5-3, page 7
Dissolved Oxygen	% Saturation	64.1	28.6	48.7	38.8	54.4			> 38
Fecal Coliform	cfu/100mL	677	201	20	211	10			
Lead	mg/L								See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.050	0.200	0.040	0.070	0.050			
Nitrogen, nitrate + nitrite	mg/L	0.020	0.125	0.084	0.085	0.080			
Nitrogen, Total	mg/L	0.52	1.10	1.08	0.99	0.70		0.95	Narrative
Nitrogen, Total Kjeldahl	mg/L	0.50	1.00	1.00	0.90	0.60			
pH	None	7.8	7.0	6.6	6.4	6.7			6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.018	0.064	0.021	0.027	0.010			
Phosphorus, Total	mg/L	0.031	0.157	0.064	0.074	0.032		0.064	Narrative
Salinity	ppth	0.3	0.2	0.2	0.2	0.1			
Specific Conductivity	umho/cm	663	475	342	394	298			≤ 1275
Temperature	deg C	26.0	26.8	29.7	28.1	28.9			
Total Hardness	mg/L								
Total Suspended Solids	mg/L	1.9	2.0	2.6	2.2	1.9			
Turbidity	NTU	3.7	3.1	2.5	2.7	2.2			≤ 29
Zinc	mg/L								See Table 5-3, page 7

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.
• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Loxahatchee River Watershed Monitoring Events (Marine)									
SITE 30	**SAMPLE DATE**	**10/10/17**	**1/16/18**	**4/10/18**	**7/10/18**			**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	101	126	131	127				
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	1.1	3.9	4.4	6.0			3.3	≤ 4.7 AGM
Copper	mg/L								<0.0037
Dissolved Oxygen	% Saturation	87.3	85.5	84.3	80.8				> 42
Fecal Coliform	cfu/100mL	52	10	10	30				
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L								
Nitrogen, nitrate + nitrite	mg/L	0.037	0.016	0.005	0.006				
Nitrogen, Total	mg/L	0.54	0.22	0.40	0.41			0.37	≤ 0.66 AGM
Nitrogen, Total Kjeldahl	mg/L	0.50			0.40				
pH	None	7.62	7.18	7.70	7.61				6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.017	0.025	0.005	0.006				
Phosphorus, Total	mg/L	0.049	0.024	0.024	0.034			0.031	≤ 0.035 AGM
Salinity	ppth	20.20	31.50	35.80	25.70				
Specific Conductivity	umho/cm	32510	48180	54218	40434				None
Temperature	deg C	29.9			31.1				
Total Hardness	mg/L								
Total Suspended Solids	mg/L	5.4	15.6	11.6	7.4				
Turbidity	NTU	3.3	4.9	4.5	2.8				≤ 29
Zinc	mg/L								≤ 0.086

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• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Loxahatchee River Watershed Monitoring Events (Marine)									
SITE 51	**SAMPLE DATE**	**10/10/17**	**1/16/18**	**4/10/18**	**7/10/18**			**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	62	116	139	106				
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	8.9	4.3	2.9	11.4			6.0	≤ 4.0 AGM
Copper	mg/L								<0.0037
Dissolved Oxygen	% Saturation	41.3	86.0	90.1	86.8				> 42
Fecal Coliform	cfu/100mL	63	164	10	63				≤ 43 cfu/100ml
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.070	0.030	0.030	0.030				
Nitrogen, nitrate + nitrite	mg/L	0.006	0.013	0.005	0.005				
Nitrogen, Total	mg/L	1.21	0.21	0.40	0.71			0.52	≤ 0.80 AGM
Nitrogen, Total Kjeldahl	mg/L	1.20			0.70				
pH	None	7.02	7.21	7.84	7.66				6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.018	0.022	0.005	0.005				
Phosphorus, Total	mg/L	0.063	0.023	0.024	0.038			0.034	≤ 0.03 AGM
Salinity	ppth	2.10	30.10	34.50	19.90				
Specific Conductivity	umho/cm	3963	46298	52403	32045				None
Temperature	deg C	28.5			29.9				
Total Hardness	mg/L								
Total Suspended Solids	mg/L	5.1	7.4	7.9	7.8				
Turbidity	NTU	3.8	3.6	5.4	3.3				≤ 29
Zinc	mg/L								≤ 0.086

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Loxahatchee River Watershed Monitoring Events (Marine)									
SITE 62 (Lox)	**SAMPLE DATE**	**10/9/17**	**11/14/17**	**12/11/17**	**1/15/18**	**2/12/18**	**3/12/18**	**4/9/18**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	70	100	120	128	178	180	175	
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	3.40	3.10	2.40	5.60	7.70	4.40	7.00	≤ 5.5 AGM
Copper	mg/L								<0.0037
Dissolved Oxygen	% Saturation								> 42
Fecal Coliform	cfu/100mL	110	132	156	121	98	41	63	≤ 43 cfu/100ml
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.060	0.050	0.080	0.050	0.070	0.030	0.030	
Nitrogen, nitrate + nitrite	mg/L	0.063	0.100	0.138	0.099	0.068	0.022	0.006	
Nitrogen, Total	mg/L	1.46	0.90	0.74	0.50	0.87	0.50	0.50	≤ 1.26 AGM
Nitrogen, Total Kjeldahl	mg/L	1.4	0.8						
pH	None	7.2	7.8	7.6	7.1	7.6	7.6	7.6	6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.070	0.049	0.029	0.028	0.015	0.021	0.010	
Phosphorus, Total	mg/L								≤ 0.075 AGM
Salinity	ppth	0.90	1.10	3.60	11.80	8.70	17.83	16.30	
Specific Conductivity	umho/cm	1740.8	2212.7	6628	19850	15003.8	28846.2	26656	None
Temperature	deg C	28.6	24.4						
Total Hardness	mg/L								
Total Suspended Solids	mg/L	4.0	8.4	3.6	4.4	5.1	3.7	4.3	
Turbidity	NTU	4	7.2	5.1	4.5	3.5	3	3.3	≤ 29
Zinc	mg/L								≤ 0.086

SITE 62 (Lox)	**SAMPLE DATE**	**5/14/18**	**6/11/18**	**7/9/18**	**8/13/18**	**9/10/18**		**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	156	78	84	102	119			
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	3.7	2.7	4.5	7.5	14.4		4.8	≤ 5.5 AGM
Copper	mg/L								<0.0037
Dissolved Oxygen	% Saturation								> 42
Fecal Coliform	cfu/100mL	201	324	52	259	52			≤ 43 cfu/100ml
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.110	0.070	0.030	0.030	0.040			
Nitrogen, nitrate + nitrite	mg/L	0.034	0.080	0.103	0.081	0.006			
Nitrogen, Total	mg/L	0.43	1.10	1.00	0.78	0.40		0.71	≤ 1.26 AGM
Nitrogen, Total Kjeldahl	mg/L	0.40	1.00	0.90	0.70	0.40			
pH	None	7.55	7.07	7.34	7.37	7.76			6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.040	0.043	0.059	0.043	0.012			
Phosphorus, Total	mg/L								≤ 0.075 AGM
Salinity	ppth	17.8	0.2	0.2	4	15.7			
Specific Conductivity	umho/cm	28836.3	315.6	469.9	7244.2	25895.7			None
Temperature	deg C	25.7	27.3	29.5	28.8	29.5			
Total Hardness	mg/L								
Total Suspended Solids	mg/L	6.6	9.6	5.0	6.6	5.4			
Turbidity	NTU	5.1	6.4	5.0	5.5	3.3			≤ 29
Zinc	mg/L								≤ 0.086

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• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Loxahatchee River Watershed Monitoring Events (Marine)									
SITE 72	**SAMPLE DATE**	**10/9/17**	**11/14/17**	**12/11/17**	**1/15/18**	**2/12/18**	**3/12/18**	**4/9/18**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	61	96	104	129	148	126	125	
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	4.4	2.6	1.4	4.5	13.9	12.1	9.5	≤ 5.5 AGM
Copper	mg/L								<0.0037
Dissolved Oxygen	% Saturation	95.7	86.9	80.8	79.3	83.8	81.3	79.4	> 42
Fecal Coliform	cfu/100mL	156	259	63	64	146	231	122	≤ 43 cfu/100ml
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.090	0.110	0.160	0.200	0.100	0.200	0.250	
Nitrogen, nitrate + nitrite	mg/L	0.018	0.039	0.060	0.048	0.038	0.027	0.044	
Nitrogen, Total	mg/L	1.02	0.84	0.86	0.65	0.84	0.63	0.80	≤ 1.26 AGM
Nitrogen, Total Kjeldahl	mg/L	1	0.8						
pH	None	8.0	8.2	7.8	7.3	7.8	7.7	7.7	6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.005	0.017	0.016	0.020	0.005	0.005	0.005	
Phosphorus, Total	mg/L	0.045	0.036	0.034	0.032	0.047	0.032	0.036	≤ 0.075 AGM
Salinity	ppth	0.50	1.60	16.20	15.30	27.40	34.39	32.60	
Specific Conductivity	umho/cm	925.3	3018.3	26484	25156	42671.4	52186.5	49867.8	None
Temperature	deg C	29.3	24.9						
Total Hardness	mg/L								
Total Suspended Solids	mg/L	3.3	1.9	2.4	4.3	12.6	9.4	14.8	
Turbidity	NTU	2.6	1.8	2.1	3.3	4.2	6.8	5.4	≤ 29
Zinc	mg/L								≤ 0.086

SITE 72	**SAMPLE DATE**	**5/14/18**	**6/11/18**	**7/9/18**	**8/13/18**	**9/10/18**		**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	127	73	81	97	95			
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	11.1	5.1	3.3	2.5	3.6		4.9	≤ 5.5 AGM
Copper	mg/L								<0.0037
Dissolved Oxygen	% Saturation	79.9	81.5	84.4	87.0	85.7			> 42
Fecal Coliform	cfu/100mL	908	148	133	122	122			≤ 43 cfu/100ml
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.120	0.080	0.090	0.080	0.250			
Nitrogen, nitrate + nitrite	mg/L	0.024	0.016	0.035	0.04	0.035			
Nitrogen, Total	mg/L	0.524	1	1.135	0.94	0.5		0.79	≤ 1.26 AGM
Nitrogen, Total Kjeldahl	mg/L	0.5	1	1.1	0.9	0.5			
pH	None	7.7	7.5	7.6	7.6	7.9			6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.01	0.006	0.01	0.007	0.013			
Phosphorus, Total	mg/L	0.04	0.06	0.03	0.026	0.025		0.036	≤ 0.075 AGM
Salinity	ppth	23.20	5.80	7.80	10.80	15.00			
Specific Conductivity	umho/cm	63745.4	10323	13573.7	18273.5	24820			None
Temperature	deg C	24.8	27.8	29.7	29.1	29.6			
Total Hardness	mg/L								
Total Suspended Solids	mg/L	5.4	2.7	3.2	1.7	3.3			
Turbidity	NTU	4.2	2.6	2.4	1.8	3.1			≤ 29
Zinc	mg/L								≤ 0.086

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• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Lake Worth Lagoon North Watershed Monitoring Events (Marine)									
SITE LWL-1	**SAMPLE DATE**	**10/19/17**	**12/14/17**	**1/31/18**	**3/29/18**	**4/26/18**	**5/24/18**	**6/22/18**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	0.016	1.93	3.9	5.54	3.82	6.25	6.92	≤ 2.9 AGM
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	% Saturation	93.83	84.98	89.54	94.29	112.08	145.04	103.79	> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.044	0.006	0.043	0.008	0.0025	0.0025	0.008	
Nitrogen, nitrate + nitrite	mg/L	0.024	0.044	0.03	0.0025	0.0025	0.0025	0.0025	
Nitrogen, Total	mg/L	0.472	0.788	0.301	0.225	0.262	0.455	0.413	≤ 0.54 AGM
Nitrogen, Total Kjeldahl	mg/L								
pH	None	8.8	8.8			8	8.2	8	6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.028	0.028	0.013	0.104	0.001	0.001	0.008	
Phosphorus, Total	mg/L	0.07	0.041	0.031	0.002	0.028	0.002	0.039	≤ 0.044 AGM
Salinity	ppth	27.6	29.6	31	34.8	33.3	21.3	27.7	
Specific Conductivity	umho/cm	43062	45565	47579	52723	50818	34048	43317	None
Temperature	deg C	29.3	20.5	20.3	23	26.6	27.9	31.3	
Total Hardness	mg/L								
Total Suspended Solids	mg/L	19	6	5	6	7	6	6	
Turbidity	NTU	0.1	1.4	1.9	2.1	1.9	0.1	2.1	≤ 29
Zinc	mg/L								≤ 0.086

SITE LWL-1	**SAMPLE DATE**	**7/12/18**	**8/23/18**	**9/20/18**				**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	11.6	6.56	7.84				3.0	≤ 2.9
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	% Saturation	129.98	104.39	119.10				106.3	> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.005	0.008	0.0025				0.007	
Nitrogen, nitrate + nitrite	mg/L	0.0025	0.0025	0.0025				0.01	
Nitrogen, Total	mg/L	0.076	0.393	0.386				0.33	≤ 0.54 AGM
Nitrogen, Total Kjeldahl	mg/L								
pH	None	8	7.9	7.9				8.2	6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.002	0.01	0.004				0.008	
Phosphorus, Total	mg/L	0.002	0.038	0.031				0.016	≤ 0.044 AGM
Salinity	ppth	29	28.9	29.4				29.04	
Specific Conductivity	umho/cm	45110	44966	45757				45025	None
Temperature	deg C	32.1	32.4	32.3				27.2	
Total Hardness	mg/L								
Total Suspended Solids	mg/L	7	1.5	4				5.7	
Turbidity	NTU	1.7	1.4	1.3				1.0	≤ 29
Zinc	mg/L								≤ 0.086

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• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Lake Worth Lagoon North Watershed Monitoring Events (Marine)									
SITE 11	**SAMPLE DATE**	**11/30/17**	**1/11/18**	**7/25/18**	**8/23/18**	**9/20/18**		**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L			2.2	6.3	2.2		3.1	≤ 2.9 AGM
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	% Saturation	86.2		95.3	86.4	105.8			> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.015	0.007						
Nitrogen, nitrate + nitrite	mg/L			0.025	0.025	0.025			
Nitrogen, Total	mg/L	0.07	0.04	0.58	0.51	0.41		0.20	≤ 0.54 AGM
Nitrogen, Total Kjeldahl	mg/L	0.07	0.04	0.55	0.48	0.38			
pH	None	8.70		7.97	7.86	7.90			6.5 to 8.5
Phosphorus, orthophosphate	mg/L			0.032	0.030	0.026			
Phosphorus, Total	mg/L	0.022	0.033					0.027	≤ 0.044 AGM
Salinity	ppth								
Specific Conductivity	umho/cm	42705		43772	44907	45362			None
Temperature	deg C	24.4		30.4	31.4	31.8			
Total Hardness	mg/L								
Total Suspended Solids	mg/L								
Turbidity	NTU	0.9	2.4	1.3	1.7	1.5			≤ 29
Zinc	mg/L								≤ 0.086

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Lake Worth Lagoon North Watershed Monitoring Events (Marine)									
SITE 13	**SAMPLE DATE**	**11/30/17**	**1/11/18**	**7/25/18**	**8/23/18**	**9/20/18**		**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L			2.2	6.9	5.1		4.3	≤ 2.9 AGM
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	% Saturation	70.7		88.6	73.3	106.8			> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.096	0.036	0.035	0.035	0.035			
Nitrogen, nitrate + nitrite	mg/L			0.025	0.025	0.025			
Nitrogen, Total	mg/L	0.38	0.15	0.71	0.62	0.41		0.40	≤ 0.54 AGM
Nitrogen, Total Kjeldahl	mg/L	0.38	0.15	0.68	0.59	0.38			
pH	None	8.4		7.9	7.7	7.9			6.5 to 8.5
Phosphorus, orthophosphate	mg/L			0.029	0.036	0.025			
Phosphorus, Total	mg/L	0.042	0.028	0.046	0.052	0.033		0.039	≤ 0.044 AGM
Salinity	ppth								
Specific Conductivity	umho/cm	35924		35405	32419	45841			None
Temperature	deg C	24.3		30.9	31.8	31.8			
Total Hardness	mg/L								
Total Suspended Solids	mg/L								
Turbidity	NTU	1.9	2.8	2.0	1.9	2.5			≤ 29
Zinc	mg/L								≤ 0.086

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Lake Worth Lagoon North Watershed Monitoring Events (Marine)									
SITE LWL-4	**SAMPLE DATE**	**10/19/17**	**12/14/17**	**1/31/18**	**3/29/18**	**4/26/18**	**5/24/18**	**6/22/18**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	6.12	2.52	2.1	1.21	226	8.9	3.43	≤ 2.9 AGM
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	% Saturation								> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.019	0.044	0.009	0.0025	0.005	0.005	0.006	
Nitrogen, nitrate + nitrite	mg/L	0.008	0.023	0.0025	0.0025	0.0025	0.0025	0.0025	
Nitrogen, Total	mg/L	0.352	0.339	0.195	0.209	0.347	0.375	0.333	≤ 0.54 AGM
Nitrogen, Total Kjeldahl	mg/L								
pH	None	8.8	9			8	8.2	8	6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.006	0.007	0.002	0.183	0.001	0.001	0.003	
Phosphorus, Total	mg/L	0.023	0.02	0.018	0.018	0.038	0.025	0.025	≤ 0.044 AGM
Salinity	ppth	28.9	31.4	34.4	36	34.9	25.8	30.1	
Specific Conductivity	umho/cm	46507	48050	52122	54342	52944	40210	46573	None
Temperature	deg C	30.8	18.3	20.1	22.6	25.6	27.6	29.9	
Total Hardness	mg/L								
Total Suspended Solids	mg/L	6	4	7	6	18	16	8	
Turbidity	NTU	2.2	2.6	2.6	2.1	10.3	2.8	2.9	≤ 29
Zinc	mg/L								≤ 0.086

SITE LWL-4	**SAMPLE DATE**	**7/12/18**	**8/23/18**	**9/20/18**				**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	5.2	5.92	5.07				5.8	≤ 2.9
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	% Saturation								> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.0025	0.007	0.009				0.007	
Nitrogen, nitrate + nitrite	mg/L	0.0025	0.0025	0.0025				0.00	
Nitrogen, Total	mg/L	0.316	0.349	0.369				0.31	≤ 0.54 AGM
Nitrogen, Total Kjeldahl	mg/L								
pH	None	8.1	7.9	7.9				8.2	6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.005	0.001	0.002				0.004	
Phosphorus, Total	mg/L	0.031	0.024	0.03				0.025	≤ 0.044 AGM
Salinity	ppth	31.2	30.1	31				31.24	
Specific Conductivity	umho/cm	48072	47741	47916				48294	None
Temperature	deg C	31.2	31.7	31.8				26.5	
Total Hardness	mg/L								
Total Suspended Solids	mg/L	8	8	12				8.4	
Turbidity	NTU	1.9	2.6	4				3.0	≤ 29
Zinc	mg/L								≤ 0.086

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Lake Worth Lagoon Central Watershed Monitoring Events (Marine)									
SITE LWL-8	**SAMPLE DATE**	**10/18/17**	**12/13/17**	**1/30/18**	**3/28/18**	**4/25/18**	**5/23/18**	**6/21/18**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	15.1	4.13	7.27	10.1	7.54	6.54	25.6	≤ 10.2 TPTV
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	% Saturation	88.87	94.19	99.62	105.63	95.74	85.46	97.99	> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.056	0.044	0.013	0.005	0.042	0.112	0.03	
Nitrogen, nitrate + nitrite	mg/L	0.149	0.162	0.072	0.007	0.038	0.157	0.048	
Nitrogen, Total	mg/L	0.818	0.612	0.506	0.511	0.482	0.891	1.35	≤ 0.66 AGM
Nitrogen, Total Kjeldahl	mg/L								
pH	None	8.7	8.8	10.6		7.8	7.7	7.8	6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.029	0.03	0.012	0.009	0.014	0.067	0.029	
Phosphorus, Total	mg/L	0.063	0.047	0.032	0.062	0.061	0.113	0.108	≤ 0.049 AGM
Salinity	ppth	17	23.5	21.9	29.5	27.4	9.81	21.6	
Specific Conductivity	umho/cm	27840	37071	34830	45556	42710	16751	21168	None
Temperature	deg C	28.9	18.8	21.1	23	26.1	25.8	30.5	
Total Hardness	mg/L								
Total Suspended Solids	mg/L	11	5	7	30	33	15	15	
Turbidity	NTU	6.2	2	3	12.7	12.1	7	9	≤ 29
Zinc	mg/L								≤ 0.086

SITE LWL-8	**SAMPLE DATE**	**7/11/18**	**8/22/18**	**9/19/18**				**AGM or %>TPTV**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	14.8	17.6	19.1				22%	≤ 10.2 TPTV
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	% Saturation	95.47	103.43	135.81					> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.072	0.015	0.011					
Nitrogen, nitrate + nitrite	mg/L	0.105	0.079	0.016					
Nitrogen, Total	mg/L	0.863	1	0.715				0.74	≤ 0.66 AGM
Nitrogen, Total Kjeldahl	mg/L								
pH	None	7.8	7.8	7.8					6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.031	0.022	0.011					
Phosphorus, Total	mg/L	0.079	0.074	0.058				0.066	≤ 0.049 AGM
Salinity	ppth	15.1	15.3	19.5					
Specific Conductivity	umho/cm	25096	25283	31476					None
Temperature	deg C	32.1	32.1	31					
Total Hardness	mg/L								
Total Suspended Solids	mg/L	11	9	9					
Turbidity	NTU	6.6	7.2	5.7					≤ 29
Zinc	mg/L								≤ 0.086

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
• TPTV - Ten Percent Threshold Value, includes all historical data from 1999 to current
• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Lake Worth Lagoon Central Watershed Monitoring Events (Marine)									
SITE 18C	**SAMPLE DATE**	**11/2/17**	**1/11/18**	**8/22/18**	**9/19/18**			**AGM or %>TPTV**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	15.10	4.13	7.27	10.10	7.54	6.5	24%	≤ 10.2 TPTV
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	% Saturation	96.3		156.6	87.3				> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.033	0.0312	0.035	0.048				
Nitrogen, nitrate + nitrite	mg/L	1.540	0.241	0.120	0.160				
Nitrogen, Total	mg/L								≤ 0.66 AGM
Nitrogen, Total Kjeldahl	mg/L	0.57	0.52	1.00	0.79				
pH	None	9.4		8.0	7.6				6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.020	0.017	0.048	0.043				
Phosphorus, Total	mg/L	0.084	0.057	0.083	0.062			0.070	≤ 0.049 AGM
Salinity	ppth								
Specific Conductivity	umho/cm	19459	15677	27302	16985				None
Temperature	deg C	20.0		33.5	31.6				
Total Hardness	mg/L								
Total Suspended Solids	mg/L								
Turbidity	NTU	8.7	6.7	10.3	5.5				≤ 29
Zinc	mg/L								≤ 0.086

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
• TPTV - Ten Percent Threshold Value, includes all historical data from 1999 to current
• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Lake Worth Lagoon Central Watershed Monitoring Events (Marine)									
SITE 18D	**SAMPLE DATE**	**11/2/17**	**1/11/18**	**8/22/18**	**9/19/18**			**AGM or %>TPTV**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	15.1	4.1	7.3	10.1	7.5	6.5	25%	≤ 10.2 TPTV
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	% Saturation	103.5		111.3	129.0				> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.026	0.007	0.035	0.035				
Nitrogen, nitrate + nitrite	mg/L	0.056	0.127	0.025	0.027				
Nitrogen, Total	mg/L	0.58	0.47	1.02	0.90			0.70	≤ 0.66 AGM
Nitrogen, Total Kjeldahl	mg/L	0.52	0.34	0.99	0.87				
pH	None	9.31		7.77	7.85				6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.000	0.007	0.026	0.024				
Phosphorus, Total	mg/L	0.063	0.044	0.061	0.097			0.064	≤ 0.049 AGM
Salinity	ppth								
Specific Conductivity	umho/cm	31556		13620	21855				None
Temperature	deg C	20.8		32.2	32.2				
Total Hardness	mg/L								
Total Suspended Solids	mg/L								
Turbidity	NTU	9.1	6.7	5.6	4.8				≤ 29
Zinc	mg/L								≤ 0.086

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
• TPTV - Ten Percent Threshold Value, includes all historical data from 1999 to current
• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Lake Worth Lagoon Central Watershed Monitoring Events (Marine)									
SITE LWL-11	**SAMPLE DATE**	**10/18/17**	**12/13/17**	**1/30/18**	**3/28/18**	**4/25/18**	**5/23/18**	**6/21/18**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	15.10	4.13	7.27	10.10	7.54	6.54	25.60	≤ 10.2 TPTV
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	% Saturation	75.98	84.96	102.77	108.43	102.16	110.53	137.69	> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.029	0.011	0.013	0.005	0.014	0.057	0.010	
Nitrogen, nitrate + nitrite	mg/L	0.063	0.136	0.018	0.003	0.017	0.136	0.003	
Nitrogen, Total	mg/L	0.04	0.60	0.42	0.49	0.38	0.81	0.71	≤ 0.66 AGM
Nitrogen, Total Kjeldahl	mg/L								
pH	None	8.7	8.7	10.7	7.9	7.9	8.1	7.9	6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.012	0.024	0.007	0.005	0.003	0.056	0.012	
Phosphorus, Total	mg/L	0.048	0.041	0.03	0.053	0.038	0.002	0.068	≤ 0.049 AGM
Salinity	ppth	22.60	30.20	25.20	29.40	28.60	12.80	17.20	
Specific Conductivity	umho/cm	36108	46500	39340	45330	44600	21340	28112	None
Temperature	deg C	28.8	22.0	21.5	23.0	26.1	27.4	31.2	
Total Hardness	mg/L								
Total Suspended Solids	mg/L	7.0	11.0	8.0	23.0	17.0	6.0	8.0	
Turbidity	NTU	4.1	1.4	2.2	11.2	5.2	4.3	3.7	≤ 29
Zinc	mg/L								≤ 0.086

SITE LWL-11	**SAMPLE DATE**	**7/11/18**	**8/22/18**	**9/19/18**				**AGM or %>TPTV**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	mg/m3	14.8	17.6	19.1				30%	≤ 10.2 TPTV
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	mg/L	65.6	169.8	61.7					> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.011	0.014	0.010					
Nitrogen, nitrate + nitrite	mg/L	0.0025	0.0025	0.0025					
Nitrogen, Total	mg/L	0.825	0.914	0.582				0.47	≤ 0.66 AGM
Nitrogen, Total Kjeldahl	mg/L								
pH	None	8.2	7.8	7.9					6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.009	0.001	0.001					
Phosphorus, Total	mg/L	0.062	0.054	0.04				0.034	≤ 0.049 AGM
Salinity	ppth	30.30	17.10	31.40					
Specific Conductivity	umho/cm	46912	28093	45300					None
Temperature	deg C	30.5	33.1	31.1					
Total Hardness	mg/L								
Total Suspended Solids	mg/L	6.0	6.0	7.0					
Turbidity	NTU	3.4	3.7	3					≤ 29
Zinc	mg/L								≤ 0.086

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• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Lake Worth Lagoon South Watershed Monitoring Events (Marine)									
SITE LWL-13	**SAMPLE DATE**	**10/17/17**	**12/12/17**	**1/29/18**	**4/24/18**	**6/20/18**	**7/10/18**	**8/21/18**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	31.5	4.56	3.71	3.52	13.6	16.8	6.41	≤ 5.7 AGM
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	% Saturation	79.56	92.77	101.53	97.48	112.72	99.61	80.70	> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.015	0.051	0.007	0.009	0.014	0.0025	0.005	
Nitrogen, nitrate + nitrite	mg/L	0.003	0.125	0.0025	0.009	0.0025	0.0025	0.0025	
Nitrogen, Total	mg/L	0.647	0.589	0.203	0.275	0.719	0.497	0.426	≤ 0.59 AGM
Nitrogen, Total Kjeldahl	mg/L								
pH	None	8.8	8.8	9.2	8	8	8	7.9	6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.002	0.022	0.007	0.004	0.013	0.007	0.003	
Phosphorus, Total	mg/L	0.042	0.042	0.014	0.024	0.052	0.042	0.027	≤ 0.050 AGM
Salinity	ppth	31.6	33.7	33.7	32.3	20	25.9	34.1	
Specific Conductivity	umho/cm	48571	51301	51220	49421	32000	40748	52105	None
Temperature	deg C	28.9	23.3	22.8	26.4	30.3	31	30.2	
Total Hardness	mg/L								
Total Suspended Solids	mg/L	4	11	9	8	6	6	4	
Turbidity	NTU	3.2	1.5	1	2.4	2.6	2.9	2	≤ 29
Zinc	mg/L								≤ 0.086

SITE LWL-13	**SAMPLE DATE**	**9/18/18**						**AGM**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	3.5						7.5	≤ 5.7 AGM
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	% Saturation	111.37							> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.01							
Nitrogen, nitrate + nitrite	mg/L	0.0025							
Nitrogen, Total	mg/L	0.44						0.44	≤ 0.59 AGM
Nitrogen, Total Kjeldahl	mg/L								
pH	None	8.00							6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.00							
Phosphorus, Total	mg/L	0.03						0.032	≤ 0.050 AGM
Salinity	ppth	27.7							
Specific Conductivity	umho/cm	43240.0							None
Temperature	deg C	30.8							
Total Hardness	mg/L								
Total Suspended Solids	mg/L	5.0							
Turbidity	NTU	1.8							≤ 29
Zinc	mg/L								≤ 0.086

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• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Lake Worth Lagoon South Watershed Monitoring Events (Marine)									
SITE LWL-18	**SAMPLE DATE**	**10/17/17**	**12/12/17**	**1/29/18**	**4/24/18**	**6/20/18**	**8/21/18**	**9/18/18**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	16.8	2.55	4.33	3.4	5.99	8.93	6	≤ 5.7 AGM
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	% Saturation								> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L	0.023	0.009	0.053	0.009	0.006	0.008	0.008	
Nitrogen, nitrate + nitrite	mg/L	0.019	0.044	0.059	0.038	0.0025	0.0025	0.0025	
Nitrogen, Total	mg/L	0.642	0.427	0.36	0.01	0.583	0.396	0.441	≤ 0.59 AGM
Nitrogen, Total Kjeldahl	mg/L								
pH	None	8.6	8.9	9.1	7.7	7.8	7.6	7.8	6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.036	0.024	0.026	0.028	0.026	0.003	0.002	
Phosphorus, Total	mg/L	0.074	0.036	0.038	0.001	0.063	0.045	0.05	≤ 0.050 AGM
Salinity	ppth	23	28.7	28.5	32.3	22.8	28.4	26.3	
Specific Conductivity	umho/cm	36600	44399	44073	49496	46450	44244	41433	None
Temperature	deg C	30	21	22.5	27	30.8	32.2	31.8	
Total Hardness	mg/L								
Total Suspended Solids	mg/L	8	10	6	12	7	7	10	
Turbidity	NTU	4.4	1	1.3	5	3.5	2.9	3.1	≤ 29
Zinc	mg/L								≤ 0.086

SITE LWL-18	**SAMPLE DATE**							**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L							5.7	≤ 5.7 AGM
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	% Saturation								> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L								
Nitrogen, nitrate + nitrite	mg/L								
Nitrogen, Total	mg/L							0.27	≤ 0.59 AGM
Nitrogen, Total Kjeldahl	mg/L								
pH	None								6.5 to 8.5
Phosphorus, orthophosphate	mg/L								
Phosphorus, Total	mg/L							0.028	≤ 0.050 AGM
Salinity	ppth								
Specific Conductivity	umho/cm								None
Temperature	deg C								
Total Hardness	mg/L								
Total Suspended Solids	mg/L								
Turbidity	NTU								≤ 29
Zinc	mg/L								≤ 0.086

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Hillsboro Watershed Monitoring Events									
SITE 1	**SAMPLE DATE**	**02/26/18**	**06/25/18**	**08/27/18**				**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L		6.7	5.7				6.1	≤ 11 AGM
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	% Saturation	80.8	51.9	61.9				63.8	> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L		0.089	0.066				0.077	
Nitrogen, nitrate + nitrite	mg/L	0.001	0.016	0.099				0.012	
Nitrogen, Total	mg/L		1.33	1.51				1.41	Narrative
Nitrogen, Total Kjeldahl	mg/L		1.31	1.41				1.36	
pH	None	7.6	7.5	7.6				7.55	6.5 to 8.5
Phosphorus, orthophosphate	mg/L								
Phosphorus, Total	mg/L		0.0590	0.0740				0.066	Narrative
Salinity	ppth	19	0.27	18.3				4.54	
Specific Conductivity	umho/cm	31300	28100	30500				29935	None
Temperature	deg C	25.3	29.9	29.8				28.2	
Total Hardness	mg/L								
Total Suspended Solids	mg/L								
Turbidity	NTU	4.4	1.7	1.2				2.1	≤ 29
Zinc	mg/L								≤ 0.086

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Hillsboro Watershed Monitoring Events									
SITE 2	**SAMPLE DATE**	**2/27/18**	**6/26/18**	**8/29/18**				**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								≤ 0.0088
Chlorophyll-a (corrected)	ug/L	12.0	5.2	1.3				4.3	≤ 11 AGM
Copper	mg/L								≤ 0.0037
Dissolved Oxygen	% Saturation	90.5	50.0	40.3				56.7	> 42
Fecal Coliform	cfu/100mL								
Lead	mg/L								≤ 0.0085
Nitrogen, Ammonia	mg/L		0.055	0.102				0.075	
Nitrogen, nitrate + nitrite	mg/L	0.214	0.030	0.107				0.088	
Nitrogen, Total	mg/L		1.32	1.64				1.47	Narrative
Nitrogen, Total Kjeldahl	mg/L		1.29	1.53				1.40	
pH	None	7.87	7.26	7.29				7.47	6.5 to 8.5
Phosphorus, orthophosphate	mg/L								
Phosphorus, Total	mg/L		0.051	0.069				0.059	Narrative
Salinity	ppth	0.32	0.21	0.32				0.28	
Specific Conductivity	umho/cm	658	443	66				268	None
Temperature	deg C	25.6	29.8	28.8				28.0	
Total Hardness	mg/L								
Total Suspended Solids	mg/L								
Turbidity	NTU	1.5	1.6	1.4				1.5	≤ 29
Zinc	mg/L								≤ 0.086

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• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Hillsboro Watershed Monitoring Events									
SITE 3	**SAMPLE DATE**	**2/27/18**	**6/26/18**	**8/29/18**				**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L	7.0	3.8	5.3				5.2	≤ 20 AGM
Copper	mg/L								See Table 5-3, page 7
Dissolved Oxygen	% Saturation	54.0	52.6	35.2				46.4	> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L								See Table 5-3, page 7
Nitrogen, Ammonia	mg/L		0.065	0.119				0.088	
Nitrogen, nitrate + nitrite	mg/L	0.146	0.020	0.124				0.071	
Nitrogen, Total	mg/L		1.28	1.79				1.52	Narrative
Nitrogen, Total Kjeldahl	mg/L		1.26	1.67				1.45	
pH	None	7.53	7.33	7.33				7.40	6.0 to 8.5
Phosphorus, orthophosphate	mg/L								
Phosphorus, Total	mg/L		0.0420	0.0820				0.059	Narrative
Salinity	ppth	0.23	0.21	0.31				0.25	
Specific Conductivity	umho/cm	472	444	637				511.1	≤ 1275
Temperature	deg C	25.9	30.2	28.7				28.2	
Total Hardness	mg/L								
Total Suspended Solids	mg/L								
Turbidity	NTU	1.4	1.5	0.6				1.1	≤ 29
Zinc	mg/L								See Table 5-3, page 7

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• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

Hillsboro Watershed Monitoring Events									
SITE S39	**SAMPLE DATE**	**10/10/17**	**11/21/17**	**12/19/17**	**1/30/18**	**2/27/18**	**3/27/18**	**4/24/18**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	144	78	103	96	60	78	81	
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L								≤ 20 AGM
Copper	mg/L								See Table 5-3, page 7
Dissolved Oxygen	% Saturation	59.20	56.20	87.85	82.26	93.98	88.48	70.21	> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L								See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.026	0.023	0.014	0.014	0.009	0.010	0.026	
Nitrogen, nitrate + nitrite	mg/L	0.012	0.005	0.003	0.003	0.015	0.009	0.012	
Nitrogen, Total	mg/L	0.01			0.93				Narrative
Nitrogen, Total Kjeldahl	mg/L	1.30	0.87	0.99	1.00	0.87	0.90	0.92	
pH	None	8.2	7.3	7.8	7.8	7.8	7.8	7.5	6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.007	0.002	0.001	0.002	0.002	0.001	0.001	
Phosphorus, Total	mg/L	0.020	0.018	0.008	0.008	0.014	0.011	0.013	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	586	351	470	437	256	336	376	≤ 1275
Temperature	deg C	27.1	23.5	21.0	20.4	26.8	22.6	26.0	
Total Hardness	mg/L	173.9	87.63	122	115.2	69.2	86.1	91.6	
Total Suspended Solids	mg/L	1.5	2.0	1.5	1.5	2.0	2.0	1.5	
Turbidity	NTU	0.8	0.8	1.5	0.4	0.6	0.6	0.4	≤ 29
Zinc	mg/L								See Table 5-3, page 7

SITE S39	**SAMPLE DATE**	**5/8/18**	**6/16/18**	**7/31/18**	**8/28/18**	**9/25/18**		**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	62	66	127	157	158		95	
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								See Table 5-3, page 7
Chlorophyll-a (corrected)	mg/m3								≤ 20 AGM
Copper	mg/L								See Table 5-3, page 7
Dissolved Oxygen	mg/L	62.26	37.34	44.00	66.37	73.74		66.2	> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L								See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.014	0.017	0.07	0.059	0.064		0.02	
Nitrogen, nitrate + nitrite	mg/L	0.0025	0.005	0.025	0.045	0.054		0.01	
Nitrogen, Total	mg/L		0.01	0.01				0.03	Narrative
Nitrogen, Total Kjeldahl	mg/L	0.83	1.01	1.46	1.49	1.63		1.1	
pH	None	8	7	7.4	7.6	7.4		7.6	6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.001	0.003	0.004	0.002	0.002		0.002	
Phosphorus, Total	mg/L	0.016	0.026	0.025	0.025	0.024		0.016	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	327	294	581	751	787		434	≤ 1275
Temperature	deg C	28.1	30.2	28.8	29.6	29.9		25.9	
Total Hardness	mg/L	77.8	72	155.1	194.2	194.3		112	
Total Suspended Solids	mg/L	1.5	1.5	1.5	7	1.5		1.8	
Turbidity	NTU	0.8	1.1	1.4	3.8	1.3		0.9	≤ 29
Zinc	mg/L								See Table 5-3, page 7

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• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

L-8 Watershed Monitoring Events									
SITE CULV10A	**SAMPLE DATE**	**10/23/17**	**4/9/17**	**5/7/18**	**6/4/18**	**7/2/18**	**8/27/18**	**9/10/18**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	111	107	108.00	22	94	278	362	
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L		6.0		4.19			9.26	≤ 20 AGM
Copper	mg/L								See Table 5-3, page 7
Dissolved Oxygen	% Saturation	3.35	79.48	91.49	46.82	45.53	18.12	97.23	> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L								See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.077	0.034	3.074	0.078	0.027	0.25	1.802	
Nitrogen, nitrate + nitrite	mg/L	0.116	0.528	0.552	0.017	0.536	0.695	0.44	
Nitrogen, Total	mg/L	1.72		1.70	1.58	1.58	3.36	4.95	Narrative
Nitrogen, Total Kjeldahl	mg/L		1.48		1.7				
pH	None	7.1	8	8	7.5	7.5	7.6	8.5	6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.128	0.093	0.11	0.027	0.045	0.11	0.177	
Phosphorus, Total	mg/L	0.225	0.21	0.21	0.099	0.112	0.158	0.241	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	431	575	405.00	83	365	1822	336	≤ 1275
Temperature	deg C	28.4	24.8	26.10	27.6	30.3	30.5	29.7	
Total Hardness	mg/L		121.3		774			474	
Total Suspended Solids	mg/L	26.0	38.0	22.00	14	11	7	12	
Turbidity	NTU	37.4	66.9	54.80	8.1	18.8	7.36	10.7	≤ 29
Zinc	mg/L								See Table 5-3, page 7

SITE CULV10A	**SAMPLE DATE**							**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L							6.14	≤ 20 AGM
Copper	mg/L								See Table 5-3, page 7
Dissolved Oxygen	% Saturation								> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L								See Table 5-3, page 7
Nitrogen, Ammonia	mg/L								
Nitrogen, nitrate + nitrite	mg/L								
Nitrogen, Total	mg/L							2.23	Narrative
Nitrogen, Total Kjeldahl	mg/L								
pH	None								6.0 to 8.5
Phosphorus, orthophosphate	mg/L								
Phosphorus, Total	mg/L							0.17	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm								≤ 1275
Temperature	deg C								
Total Hardness	mg/L								
Total Suspended Solids	mg/L								
Turbidity	NTU								≤ 29
Zinc	mg/L								See Table 5-3, page 7

• Metal exceedences are based on hardness

Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

S-2-6-7 Watershed Monitoring Events									
SITE S2	**SAMPLE DATE**	**10/23/17**	**11/20/17**	**12/18/17**	**1/16/18**	**2/12/18**	**3/12/18**	**4/9/18**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	204	381	156	158	111	124	101	
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L								≤ 20 AGM
Copper	mg/L								See Table 5-3, page 7
Dissolved Oxygen	% Saturation	4.6	65.4	75.1	81.8	81.0	77.6	76.6	> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L								See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.116	0.189	0.185	0.233	0.042	0.038	0.028	
Nitrogen, nitrate + nitrite	mg/L	0.231	1.087	0.35	0.419	0.344	0.178	0.518	
Nitrogen, Total	mg/L	2.04	3.68		1.77	1.43	1.29	1.45	Narrative
Nitrogen, Total Kjeldahl	mg/L			1.48				1.24	
pH	None	7.2	7.8	7.8	7.8	7.6	7.6	8.2	6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.123	0.102	0.092	0.081	0.092	0.058	0.1	
Phosphorus, Total	mg/L	0.184	0.126	0.151	0.121	0.163	0.111	0.175	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	401	1571	574	596	388	422	368	≤ 1275
Temperature	deg C	28.1	23.0	19.8	16.9	23.2	20.2	25	
Total Hardness	mg/L			192.8				127.4	
Total Suspended Solids	mg/L	11.0	7.0	6	5.0	9	7	17	
Turbidity	NTU	8.2	6.2	5.7	10.8	17.3	9.1	28	≤ 29
Zinc	mg/L								See Table 5-3, page 7

SITE S2	**SAMPLE DATE**	**5/7/18**	**6/4/18**	**7/2/18**	**8/27/18**	**9/24/18**		**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	108	338	309	103				
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L								≤ 20 AGM
Copper	mg/L								See Table 5-3, page 7
Dissolved Oxygen	% Saturation	89.95	48.21	33.89	62.90				> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L								See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.018	0.457	0.546	0.104	0.183			
Nitrogen, nitrate + nitrite	mg/L	0.331	0.48	0.621	0.075	0.134			
Nitrogen, Total	mg/L	1.32		3.08	1.17			1.77	Narrative
Nitrogen, Total Kjeldahl	mg/L		2.82						
pH	None	8	7.6	7.6	7.8	7.6			6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.067	0.114	0.065	0.064	0.071			
Phosphorus, Total	mg/L	0.128	0.174	0.105	0.108	0.098		0.13	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	417	1533	1133	399	448			≤ 1275
Temperature	deg C	27.3	30.6	28.5	30.6	29.7			
Total Hardness	mg/L		495.6						
Total Suspended Solids	mg/L	10	14	4	6	1.5			
Turbidity	NTU	13.2	10.2	3.7	6.2	2.9			≤ 29
Zinc	mg/L								See Table 5-3, page 7

• Metal exceedences are based on hardness

Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

S-2-6-7 Watershed Monitoring Events									
SITE 39	**SAMPLE DATE**	**1/16/18**	**3/14/18**	**5/17/18**	**7/27/18**	**9/28/18**			**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L	151							
Arsenic	mg/L	0.0007		0.01	0.0071	0.0071			≤ 0.05
Cadmium	mg/L	0.0001		0.00	0.00033	0.00033			See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L	12.9	5.0	8.90	9.7	3.4			≤ 20 AGM
Copper	mg/L	0.000325		0.00	0.0026	0.0026			See Table 5-3, page 7
Dissolved Oxygen	% Saturation	84.6	83.1	37.30	52.5	47.9			> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L	0.0007		0.01	0.0046	0.0046			See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.174	0.052	0.88	0.17	0.087			
Nitrogen, nitrate + nitrite	mg/L	0.471	0.27	0.44	0.11	0.1			
Nitrogen, Total	mg/L	1.57	1.37	2.94	1.81	0.96			Narrative
Nitrogen, Total Kjeldahl	mg/L	1.1	1.1	2.5	1.7	0.86			
pH	None	9.19		7.35	7.89	7.68			6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.069	0.080	0.18	0.091	0.078			
Phosphorus, Total	mg/L	0.11	0.13	0.26	0.11	0.087			Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	511	394	947	903	374.4			≤ 1275
Temperature	deg C	17.3	19	25.8	30.3	29.3			
Total Hardness	mg/L	192		330	255	129			
Total Suspended Solids	mg/L	3.0	12.0	5	17.0	5			
Turbidity	NTU	11	15.1	3.1	7	3.5			≤ 29
Zinc	mg/L	0.0039		0.0100	0.0110	0.011			See Table 5-3, page 7

SITE 39	**SAMPLE DATE**	**Water Quality**	**1/0/00**	**1/0/00**	**1/0/00**	**1/0/00**	**1/0/00**	**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L							7.17	≤ 20 AGM
Copper	mg/L								See Table 5-3, page 7
Dissolved Oxygen	% Saturation								> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L								See Table 5-3, page 7
Nitrogen, Ammonia	mg/L								
Nitrogen, nitrate + nitrite	mg/L								
Nitrogen, Total	mg/L							1.62	Narrative
Nitrogen, Total Kjeldahl	mg/L								
pH	None								6.0 to 8.5
Phosphorus, orthophosphate	mg/L								
Phosphorus, Total	mg/L							0.13	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm								≤ 1275
Temperature	deg C								
Total Hardness	mg/L								
Total Suspended Solids	mg/L								
Turbidity	NTU								≤ 29
Zinc	mg/L								See Table 5-3, page 7

• Metal exceedences are based on hardness

Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2017 - September 2018

S-2-6-7 Watershed Monitoring Events									
SITE 43	**SAMPLE DATE**	**1/16/2018**	**3/14/2018**	**5/17/2018**	**7/27/2018**	**9/28/2018**			**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L	0.000745		0.0066	0.0071	0.0071			≤ 0.05
Cadmium	mg/L	0.000065		0.0005	0.00033	0.00033			See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L	7.1	6.5	16.8	21.8	2.2			≤ 20 AGM
Copper	mg/L	0.000325		0.0025	0.0026	0.0026			See Table 5-3, page 7
Dissolved Oxygen	% Saturation	90.1	19	23.9	66.2	48.1			> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L	0.0007		0.005	0.0046	0.0046			See Table 5-3, page 7
Nitrogen, Ammonia	mg/L	0.186	0.038	0.58	0.12	0.17			
Nitrogen, nitrate + nitrite	mg/L	0.363	0.11	1.2	0.091	0.084			
Nitrogen, Total	mg/L	1.63	1.21	3.70	1.19	1.08			Narrative
Nitrogen, Total Kjeldahl	mg/L	1.27	1.1	2.5	1.1	1			
pH	None	9.03		7.13	7.89	7.58			6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.162	0.041	0.2	0.083	0.076			
Phosphorus, Total	mg/L	0.205	0.071	0.22	0.1	0.098			Narrative
Salinity	ppth								
Specific Conductivity	umho/cm	588	425	954	501	435.2			≤ 1275
Temperature	deg C	17.6	18.8	25.5	30.9	29.3			
Total Hardness	mg/L	262		322	160	149			
Total Suspended Solids	mg/L	4.9	7.5	5.5	5	5			
Turbidity	NTU	8.2	7.9	4.2	15	4			≤ 29
Zinc	mg/L	0.00253		0.02	0.011	0.011			See Table 5-3, page 7

SITE 43	**SAMPLE DATE**							**Geometric Mean**	**Numeric Surface Water Quality Standard Criteria**
PARAMETER	**UNITS**								
Alkalinity	mg/L								
Arsenic	mg/L								≤ 0.05
Cadmium	mg/L								See Table 5-3, page 7
Chlorophyll-a (corrected)	ug/L							8.20	≤ 20 AGM
Copper	mg/L								See Table 5-3, page 7
Dissolved Oxygen	% Saturation								> 38
Fecal Coliform	cfu/100mL								
Lead	mg/L								See Table 5-3, page 7
Nitrogen, Ammonia	mg/L								
Nitrogen, nitrate + nitrite	mg/L								
Nitrogen, Total	mg/L							1.57	Narrative
Nitrogen, Total Kjeldahl	mg/L								
pH	None								6.0 to 8.5
Phosphorus, orthophosphate	mg/L								
Phosphorus, Total	mg/L							0.13	Narrative
Salinity	ppth								
Specific Conductivity	umho/cm								≤ 1275
Temperature	deg C								
Total Hardness	mg/L								
Total Suspended Solids	mg/L								
Turbidity	NTU								≤ 29
Zinc	mg/L								See Table 5-3, page 7

• Metal exceedences are based on hardness

Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

AGM - Annual Geometric Mean

TABLE 5-5
Summary of Exceedances per Site by Parameter
October 1, 2017 - September 30, 2018

Watershed	Site	Dissolved Oxygen	Turbidity	Fecal Coliform	PH	Chlorophyll-a* (Annual Geometric Mean)	Total Phosphorus (Annual Geometric Mean)	Total Nitrogen (Annual Geometric Mean)
C-15	31E							
	31C							
	31B							
C-16	22							
	24							
	27B	1/3			1/3			
	27A				1/4			
	28					20.7		
C-17	12A							
	C17S44							
C-18	16	2/4			1/3			
	15				1/3			
	92							
	81							
C-51	38B		3/5		01/04			
	37B	2/4			01/03			
	C51S155							
Loxahatchee River	69	2/12						
	30							
	51	1/4		4/5		6.0	0.034	
	62			11/12				
	72			12/12				
Lake Worth Lagoon North	LWL-1				1/4	3.0		
	11							
	13					4.3		
	LWL-4	2/8				5.8		
Lake Worth Lagoon Central	LWL-8	3/4				22%	0.066	0.74
	18C	1/3				24%	0.070	
	18D	1/3				25%	0.064	0.70
	LWL-11					30%		
Lake Worth Lagoon South Watershed	LWL-13	3/8				8.8		
	LWL-18							
Hillsboro	1							
	2	1/3						
	3	1/3						
	S-39	1/12						
L-8	CULV10	1/7	3/7					
S-2-6-7	S2	1/11						
	39							
	43	2.5	1.4					

*** Chlorophyll-a criteria for Lake Worth Lagoon Central and South Watershed is based on ten percent of the measurements exceeding the standard.**

Table 5-6
Monitoring Data Summary
C-15 Watershed

SITE 31B		06/15/00 - 09/27/18			Samples 127		
		Count	**Geometric Mean**	**Median**	**Max**	**Min**	**Standard Deviation**
Alkalinity	mg/L	91	149	152	207	32	19
Arsenic	mg/L	38	0.0023	0.0025	0.0070	0.0005	0.0013
Cadmium	mg/L	50	0.0005	0.0003	0.0050	0.0001	0.0018
Chlorophyll-a (corrected)	ug/L	44	13.7	17.1	52.0	1.7	13.6
Copper	mg/L	50	0.0045	0.0039	0.0200	0.0013	0.0036
Dissolved Oxygen	% Saturation	15	106.2	105.0	141.5	70.0	22.6
Fecal Coliform	DHu/100mL	25	85	110	420	1	100
Lead	mg/L	50	0.0021	0.0025	0.0260	0.0003	0.0037
Nitrogen, Ammonia	mg/L	116	0.019	0.015	0.305	0.003	0.052
Nitrogen, nitrate + nitrite	mg/L	121	0.019	0.015	0.470	0.001	0.102
Nitrogen, Total	mg/L	121	1.02	1.00	4.23	0.57	0.40
Nitrogen, Total KjelDHhl	mg/L	125	0.95	0.93	4.18	0.56	0.37
pH	None	125	7.8	7.8	9.1	6.7	0.4
Phosphorus, orthophosphate	mg/L	122	0.053	0.070	0.344	0.001	0.070
Phosphorus, Total	mg/L	109	0.106	0.107	0.702	0.003	0.092
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	127	494	495	787	392	51
Temperature	deg C	127	25.1	26.0	32.5	15.0	4.0
Total Hardness	mg/L	57	177	177	230	138	18
Total Suspended Solids	mg/L	123	2.9	3.0	43.7	1.0	4.5
Turbidity	NTU	127	2.5	2.7	17.8	0.1	2.2
Zinc	mg/L	50	0.0062	0.0050	0.0492	0.0027	0.0065

Table 5-6
Monitoring Data Summary
C-15 Watershed
(Page 2 of 24)

SITE 31E		03/24/99 - 09/27/18			Samples 92		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	26	165	164	210	123	22
Arsenic	mg/L	75	0.0025	0.0025	0.0098	0.0005	0.0015
Cadmium	mg/L	89	0.0005	0.0003	0.0050	0.0001	0.0017
Chlorophyll-a (corrected)	ug/L	80	21.3	23.7	120.0	2.5	23.5
Copper	mg/L	88	0.0048	0.0048	0.0200	0.0010	0.0035
Dissolved Oxygen	% Saturation	18	65.1	76.2	127.8	17.2	25.5
Fecal Coliform	cfu/100mL	33	67	50	5000	1	875
Lead	mg/L	78	0.0020	0.0023	0.0050	0.0005	0.0014
Nitrogen, Ammonia	mg/L	85	0.051	0.050	0.820	0.003	0.124
Nitrogen, nitrate + nitrite	mg/L	79	0.047	0.046	0.785	0.001	0.179
Nitrogen, Total	mg/L	78	1.55	1.52	3.87	0.39	0.65
Nitrogen, Total Kjeldahl	mg/L	83	1.47	1.50	3.84	0.37	0.65
pH	None	89	7.6	7.6	8.9	6.3	0.4
Phosphorus, orthophosphate	mg/L	85	0.126	0.136	1.330	0.003	0.219
Phosphorus, Total	mg/L	81	0.242	0.233	1.490	0.020	0.261
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	90	547	552	833	227	111
Temperature	deg C	90	25.5	26.1	32.0	16.7	3.9
Total Hardness	mg/L	87	196	195	390	99	38
Total Suspended Solids	mg/L	87	6.3	7.0	18.0	1.0	3.5
Turbidity	NTU	88	4.5	4.8	15.9	0.2	2.7
Zinc	mg/L	89	0.0057	0.0050	0.0140	0.0018	0.0030

SITE 31C		01/28/99 - 09/27/18			Samples 93		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	23	151	152	188	123	16
Arsenic	mg/L	73	0.0029	0.0025	2.2350	0.0005	0.2612
Cadmium	mg/L	90	0.0005	0.0004	0.0050	0.0001	0.0017
Chlorophyll-a (corrected)	ug/L	78	15.8	18.5	93.0	0.1	17.8
Copper	mg/L	90	0.0040	0.0043	0.0295	0.0003	0.0041
Dissolved Oxygen	% Saturation	18	77.2	78.4	137.5	33.1	30.3
Fecal Coliform	cfu/100mL	33	69	70	5000	3	886
Lead	mg/L	78	0.0021	0.0024	0.0070	0.0005	0.0015
Nitrogen, Ammonia	mg/L	87	0.044	0.040	0.456	0.001	0.079
Nitrogen, nitrate + nitrite	mg/L	79	0.068	0.064	1.300	0.006	0.186
Nitrogen, Total	mg/L	80	1.24	1.15	3.09	0.62	0.57
Nitrogen, Total Kjeldahl	mg/L	90	1.10	1.07	3.07	0.11	0.53
pH	None	91	7.5	7.5	8.5	6.3	0.4
Phosphorus, orthophosphate	mg/L	87	0.045	0.050	0.440	0.003	0.077
Phosphorus, Total	mg/L	83	0.125	0.120	0.560	0.020	0.093
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	92	537	510	11188	391	1115
Temperature	deg C	90	26.1	25.8	32.0	19.2	3.3
Total Hardness	mg/L	89	181	184	260	16	25
Total Suspended Solids	mg/L	82	4.1	4.0	15.7	1.0	3.3
Turbidity	NTU	88	2.7	2.8	13.3	0.1	2.0
Zinc	mg/L	90	0.0058	0.0050	0.1030	0.0016	0.0109

Table 5-6
Monitoring Data Summary
C-16 Watershed

SITE 22		01/29/04 - 09/25/18			Samples 73		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	25	142	141	185	110	16
Arsenic	mg/L	71	0.0025	0.0025	0.0300	0.0005	0.0034
Cadmium	mg/L	71	0.0004	0.0003	0.0026	0.0002	0.0006
Chlorophyll-a (corrected)	ug/L	71	12.1	15.2	62.7	0.8	13.7
Copper	mg/L	71	0.0030	0.0028	0.0180	0.0010	0.0038
Dissolved Oxygen	% Saturation	16	67.8	104.3	149.5	9.4	47.4
Fecal Coliform	cfu/100mL	16	42	39	600	2	210
Lead	mg/L	59	0.0017	0.0021	0.0050	0.0005	0.0009
Nitrogen, Ammonia	mg/L	67	0.027	0.030	1.010	0.002	0.122
Nitrogen, nitrate + nitrite	mg/L	66	0.053	0.040	1.990	0.003	0.279
Nitrogen, Total	mg/L	65	1.03	1.00	3.07	0.53	0.40
Nitrogen, Total Kjeldahl	mg/L	72	0.88	0.88	2.19	0.27	0.29
pH	None	69	8.0	8.0	8.9	6.5	0.4
Phosphorus, orthophosphate	mg/L	67	0.013	0.022	0.086	0.001	0.021
Phosphorus, Total	mg/L	72	0.053	0.059	0.840	0.003	0.103
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	70	499	498	1008	7	141
Temperature	deg C	71	25.6	26.0	36.3	17.1	4.3
Total Hardness	mg/L	71	180	182	239	139	22
Total Suspended Solids	mg/L	70	3.9	4.4	33.8	1.0	4.2
Turbidity	NTU	70	2.4	2.6	6.6	0.1	1.4
Zinc	mg/L	71	0.0052	0.0050	0.0600	0.0013	0.0091

SITE 24		01/25/99 - 09/25/18			Samples 89		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	19	113	150	177	3	38
Arsenic	mg/L	66	0.0026	0.0025	0.0071	0.0005	0.0013
CFdmium	mg/L	81	0.0005	0.0003	0.0050	0.0002	0.0017
Chlorophyll-a (corrected)	ug/L	77	12.5	14.2	49.0	2.0	11.3
Copper	mg/L	81	0.0033	0.0034	0.0113	0.0007	0.0030
Dissolved Oxygen	% Saturation	16	111.8	116.6	145.6	74.5	24.1
FeCFI Coliform	cfu/100mL	30	67	95	2300	1	491
Lead	mg/L	74	0.0022	0.0025	0.0050	0.0007	0.0014
Nitrogen, Ammonia	mg/L	80	0.027	0.033	0.105	0.007	0.024
Nitrogen, nitrate + nitrite	mg/L	79	0.040	0.029	0.940	0.001	0.153
Nitrogen, Total	mg/L	79	0.99	0.98	2.67	0.11	0.42
Nitrogen, Total Kjeldahl	mg/L	80	0.89	0.90	2.61	0.09	0.40
pH	None	85	8.0	8.0	8.8	7.1	0.4
Phosphorus, orthophosphate	mg/L	82	0.012	0.015	0.230	0.001	0.032
Phosphorus, Total	mg/L	84	0.060	0.057	3.053	0.012	0.329
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	87	521	486	4220	348	415
Temperature	deg C	86	25.0	26.0	33.1	2.8	4.9
Total Hardness	mg/L	79	176	178	233	111	24
Total Suspended Solids	mg/L	83	4.4	5.0	16.5	1.0	3.2
Turbidity	NTU	86	3.1	3.2	11.4	0.6	1.9
Zinc	mg/L	81	0.0057	0.0050	0.0360	0.0013	0.0056

Table 5-6
Monitoring Data Summary
C-16 Watershed
(Page 4 of 24)

SITE 27B		01/28/99 - 09/27/18			Samples 80		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	22	178	178	222	121	28
Arsenic	mg/L	61	0.0026	0.0025	0.0120	0.0005	0.0018
Cadmium	mg/L	78	0.0005	0.0003	0.0050	0.0001	0.0018
Chlorophyll-a (corrected)	ug/L	66	13.7	16.4	76.4	0.5	16.3
Copper	mg/L	78	0.0045	0.0043	0.0975	0.0007	0.0111
Dissolved Oxygen	% Saturation	13	62.1	67.3	139.7	21.9	33.4
Fecal Coliform	cfu/100mL	29	139	100	6000	7	1526
Lead	mg/L	72	0.0022	0.0025	0.0067	0.0005	0.0015
Nitrogen, Ammonia	mg/L	74	0.051	0.049	0.740	0.007	0.097
Nitrogen, nitrate + nitrite	mg/L	71	0.074	0.064	0.785	0.006	0.158
Nitrogen, Total	mg/L	70	1.49	1.52	3.42	0.75	0.50
Nitrogen, Total Kjeldahl	mg/L	76	1.35	1.37	3.37	0.68	0.50
pH	None	78	7.6	7.6	8.7	6.7	0.4
Phosphorus, orthophosphate	mg/L	74	0.067	0.067	0.680	0.001	0.159
Phosphorus, Total	mg/L	76	0.164	0.158	0.770	0.030	0.178
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	79	556	564	10481	8	1125
Temperature	deg C	79	25.3	26.6	32.4	16.5	4.0
Total Hardness	mg/L	78	196	201	288	113	36
Total Suspended Solids	mg/L	76	5.6	6.3	20.0	1.0	3.9
Turbidity	NTU	78	3.1	3.2	11.4	0.6	1.9
Zinc	mg/L	77	0.0057	0.0050	0.0360	0.0013	0.0056

SITE 27A		01/28/99 - 09/27/18			Samples 92		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	25	152	150	191	128	15
Arsenic	mg/L	73	0.0026	0.0025	0.0078	0.0005	0.0014
Cadmium	mg/L	90	0.0005	0.0003	0.0050	0.0001	0.0017
Chlorophyll-a (corrected)	ug/L	76	14.1	15.4	66.0	1.6	14.9
Copper	mg/L	90	0.0044	0.0046	0.0200	0.0013	0.0032
Dissolved Oxygen	% Saturation	18	87.7	94.6	135.3	39.4	21.5
Fecal Coliform	cfu/100mL	32	52	54	1200	4	255
Lead	mg/L	84	0.0022	0.0025	0.0150	0.0005	0.0021
Nitrogen, Ammonia	mg/L	87	0.036	0.039	2.060	0.002	0.221
Nitrogen, nitrate + nitrite	mg/L	83	0.048	0.050	0.750	0.006	0.134
Nitrogen, Total	mg/L	83	1.14	1.19	4.32	0.02	0.58
Nitrogen, Total Kjeldahl	mg/L	88	1.11	1.16	3.96	0.08	0.53
pH	None	89	7.8	7.9	9.0	6.5	0.4
Phosphorus, orthophosphate	mg/L	81	0.034	0.039	0.440	0.001	0.093
Phosphorus, Total	mg/L	86	0.116	0.120	1.580	0.003	0.204
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	90	519	514	939	219	115
Temperature	deg C	88	25.5	26.0	32.6	18.5	4.0
Total Hardness	mg/L	90	181	180	258	117	24
Total Suspended Solids	mg/L	81	4.0	5.0	38.0	0.5	4.8
TurBWdity	NTU	89	3.1	3.3	71.5	0.1	7.9
Zinc	mg/L	88	0.0058	0.0050	0.0690	0.0013	0.0090

Table 5-6
Monitoring Data Summary
C-16 Watershed

SITE 28		01/28/99 - 09/27/18			Samples 131		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	90	147	147	210	119	15
Arsenic	mg/L	37	0.0022	0.0025	0.0071	0.0003	0.0014
Cadmium	mg/L	54	0.0007	0.0004	0.0050	0.0002	0.0020
Chlorophyll-a (corrected)	ug/L	43	8.0	8.5	50.0	1.6	10.4
Copper	mg/L	54	0.0035	0.0033	0.0200	0.0007	0.0039
Dissolved Oxygen	% Saturation	15	92.3	102.3	147.0	46.4	23.7
Fecal Coliform	cfu/100mL	28	104	92	2600	10	663
Lead	mg/L	54	0.0024	0.0025	0.0261	0.0003	0.0036
Nitrogen, Ammonia	mg/L	124	0.026	0.033	2.760	0.001	0.247
Nitrogen, nitrate + nitrite	mg/L	126	0.037	0.050	13.000	0.001	1.157
Nitrogen, Total	mg/L	125	1.02	0.99	13.71	0.11	1.25
Nitrogen, Total Kjeldahl	mg/L	129	0.90	0.87	5.81	0.08	0.51
pH	None	129	7.7	7.8	8.6	6.2	0.4
Phosphorus, orthophosphate	mg/L	129	0.020	0.030	0.209	0.001	0.046
Phosphorus, Total	mg/L	117	0.073	0.067	0.877	0.020	0.091
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	131	447	475	946	5	122
Temperature	deg C	131	25.2	25.9	56.8	13.1	4.9
Total Hardness	mg/L	61	174	175	224	120	22
Total Suspended Solids	mg/L	125	3.0	3.0	24.9	1.0	3.3
Turbidity	NTU	131	2.4	2.5	12.0	0.1	1.9
Zinc	mg/L	54	0.0063	0.0050	0.1180	0.0024	0.0154

Table 5-6
Monitoring Data Summary
C-17 Watershed

SITE 12A		01/19/99 - 09/25/18			Samples 96		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	29	147	148	186	87	20
Arsenic	mg/L	77	0.0027	0.0025	0.0071	0.0005	0.0015
Cadmium	mg/L	94	0.0005	0.0003	0.0050	0.0001	0.0017
Chlorophyll-a (corrected)	ug/L	82	12.7	15.9	74.8	1.2	11.8
Copper	mg/L	94	0.0036	0.0031	0.0500	0.0010	0.0057
Dissolved Oxygen	% Saturation	18	76.5	83.6	108.9	36.2	19.0
Fecal Coliform	CKu/100mL	35	138	110	4000	23	660
Lead	mg/L	88	0.0020	0.0024	0.0076	0.0004	0.0016
Nitrogen, Ammonia	mg/L	91	0.066	0.057	2.260	0.008	0.260
Nitrogen, nitrate + nitrite	mg/L	86	0.077	0.081	1.590	0.006	0.187
Nitrogen, Total	mg/L	88	1.40	1.15	9.08	0.03	2.29
Nitrogen, Total Kjeldahl	mg/L	93	1.07	1.08	3.10	0.38	0.42
pH	None	93	7.6	7.7	9.4	6.2	0.6
Phosphorus, orthophosphate	mg/L	84	0.008	0.010	0.058	0.001	0.013
Phosphorus, Total	mg/L	90	0.052	0.063	0.340	0.003	0.041
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	94	450	464	831	231	74
Temperature	deg C	94	25.2	25.7	31.7	16.3	3.8
Total Hardness	mg/L	89	163	171	216	86	25
Total Suspended Solids	mg/L	83	4.5	5.0	15.5	1.0	3.1
Turbidity	NTU	83	3.5	3.8	6.3	0.3	1.3
Zinc	mg/L	94	0.0067	0.0054	0.0614	0.0013	0.0082

SITE C17S44		01/19/99 - 09/13/18			Samples 160		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	78	158	163	192	112	19
Arsenic	mg/L	14	0.0017	0.0019	0.0049	0.0005	0.0011
Cadmium	mg/L	31	0.0014	0.0008	0.0050	0.0002	0.0022
Chlorophyll-a (corrected)	ug/L	23	9.2	9.1	40.0	1.7	9.7
Copper	mg/L	31	0.0042	0.0050	0.0500	0.0007	0.0089
Dissolved Oxygen	% Saturation	22	#NUM!	0.0	98.5	0.0	38.6
Fecal Coliform	cfu/100mL	31	96	100	730	5	215
Lead	mg/L	31	0.0021	0.0019	0.0250	0.0003	0.0045
Nitrogen, Ammonia	mg/L	156	0.034	0.040	1.500	0.003	0.130
Nitrogen, nitrate + nitrite	mg/L	157	0.035	0.048	0.374	0.001	0.093
Nitrogen, Total	mg/L	154	0.87	0.91	1.51	0.02	0.22
Nitrogen, Total Kjeldahl	mg/L	117	0.87	0.87	1.33	0.20	0.16
pH	None	158	7.7	7.7	8.3	6.6	0.3
Phosphorus, orthophosphate	mg/L	156	0.006	0.006	0.095	0.001	0.017
Phosphorus, Total	mg/L	149	0.041	0.046	0.126	0.002	0.022
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	160	460	465	728	313	50
Temperature	deg C	160	25.5	26.1	90.0	15.7	6.4
Total Hardness	mg/L	40	174	185	233	90	30
Total Suspended Solids	mg/L	156	2.7	3.0	26.0	0.1	3.5
Turbidity	NTU	159	2.5	2.6	18.1	0.9	1.8
Zinc	mg/L	31	0.0080	0.0100	0.0954	0.0032	0.0161

Table 5-6
Monitoring Data Summary
C-18 Watershed

SITE 16		01/19/99 - 09/25/18			Samples 80		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	30	120	139	216	31	51
Arsenic	mg/L	75	0.0021	0.0025	0.0071	0.0005	0.0012
Cadmium	mg/L	92	0.0005	0.0003	0.0050	0.0001	0.0017
Chlorophyll-a (corrected)	ug/L	78	4.0	3.7	43.0	0.6	6.9
Copper	mg/L	90	0.0021	0.0017	0.0100	0.0003	0.0033
Dissolved Oxygen	% Saturation	18	48.0	46.8	147.1	23.2	33.1
Fecal Coliform	cfu/100mL	34	33	20	1400	2	249
Lead	mg/L	90	0.0021	0.0025	0.0125	0.0005	0.0018
Nitrogen, Ammonia	mg/L	87	0.042	0.040	0.498	0.008	0.076
Nitrogen, nitrate + nitrite	mg/L	85	0.040	0.041	1.210	0.006	0.163
Nitrogen, Total	mg/L	85	0.99	1.01	2.35	0.21	0.42
Nitrogen, Total Kjeldahl	mg/L	92	0.93	0.94	2.30	0.16	0.41
pH	None	85	7.3	7.3	9.7	6.0	0.5
Phosphorus, orthophosphate	mg/L	86	0.008	0.009	0.560	0.001	0.061
Phosphorus, Total	mg/L	87	0.033	0.032	1.500	0.001	0.162
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	86	338	384	737	105	136
Temperature	deg C	86	24.6	25.4	33.4	15.8	3.8
Total Hardness	mg/L	83	128	146	734	30	87
Total Suspended Solids	mg/L	88	2.3	2.0	29.7	1.0	3.9
Turbidity	NTU	90	1.7	1.6	10.2	0.5	1.3
Zinc	mg/L	91	0.0061	0.0050	0.0500	0.0012	0.0114

SITE 15		01/19/99 - 09/25/18			Samples 91		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	26	110	99	244	41	65
Arsenic	mg/L	72	0.0021	0.0025	0.0071	0.0005	0.0014
Cadmium	mg/L	89	0.0006	0.0005	0.0050	0.0001	0.0017
Chlorophyll-a (corrected)	ug/L	76	2.3	2.3	19.0	0.1	2.5
Copper	mg/L	88	0.0028	0.0018	49.5000	0.0003	7.1759
Dissolved Oxygen	% Saturation	15	41.2	42.7	55.1	27.5	8.8
Fecal Coliform	cfu/100mL	34	48	35	1100	1	230
Lead	mg/L	89	0.0020	0.0025	0.0060	0.0005	0.0014
Nitrogen, Ammonia	mg/L	87	0.045	0.040	8.167	0.007	0.871
Nitrogen, nitrate + nitrite	mg/L	82	0.027	0.025	0.480	0.006	0.087
Nitrogen, Total	mg/L	74	0.90	0.94	4.51	0.01	0.57
Nitrogen, Total Kjeldahl	mg/L	82	0.89	0.89	4.50	0.29	0.53
pH	None	82	7.2	7.3	9.4	2.8	0.7
Phosphorus, orthophosphate	mg/L	82	0.005	0.003	0.071	0.001	0.014
Phosphorus, Total	mg/L	83	0.020	0.020	1.500	0.001	0.280
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	83	310	331	632	91	131
Temperature	deg C	83	23.6	24.0	30.9	15.8	3.9
Total Hardness	mg/L	76	104	100	260	38	56
Total Suspended Solids	mg/L	85	1.8	1.8	15.0	0.5	2.1
Turbidity	NTU	87	0.8	0.7	18.3	0.1	2.0
Zinc	mg/L	89	0.0054	0.0050	0.0300	0.0012	0.0043

Table 5-6
Monitoring Data Summary
C-18 Watershed

SITE 92		01/19/99 - 08/13/18			Samples 159		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	103	140.12	139.00	268.00	61.00	51.07
Arsenic	mg/L	16	0.00	0.00	0.00	0.00	0.00
Cadmium	mg/L	33	0.00	0.00	0.01	0.00	0.00
Chlorophyll-a (corrected)	ug/L	38	3.56	3.55	15.30	1.00	2.93
Copper	mg/L	33	0.00	0.00	0.01	0.00	0.00
Dissolved Oxygen	% Saturation	15	46.28	56.20	78.90	5.70	20.56
Fecal Coliform	cfu/100mL	37	14.82	12.00	730.00	1.00	149.95
Lead	mg/L	32	0.00	0.00	0.02	0.00	0.00
Nitrogen, Ammonia	mg/L	155	0.03	0.04	1.50	0.00	0.12
Nitrogen, nitrate + nitrite	mg/L	154	0.02	0.03	0.52	0.00	0.06
Nitrogen, Total	mg/L	157	0.82	0.89	1.65	0.00	0.22
Nitrogen, Total Kjeldahl	mg/L	142	0.86	0.87	1.40	0.22	0.16
pH	None	157	7.44	7.50	8.20	6.24	0.34
Phosphorus, orthophosphate	mg/L	158	0.00	0.00	0.50	0.00	0.04
Phosphorus, Total	mg/L	146	0.02	0.02	23.00	0.00	1.90
Salinity	ppth	15	0.25	0.20	0.40	0.20	0.09
Specific Conductivity	umho/cm	159	413.65	410.00	909.00	148.00	167.93
Temperature	deg C	157	26.41	26.50	3001.00	15.80	237.47
Total Hardness	mg/L	40	158.36	171.90	298.00	60.00	60.54
Total Suspended Solids	mg/L	155	1.30	1.50	153.00	0.00	12.20
Turbidity	NTU	158	1.63	1.60	6.90	0.40	1.09
Zinc	mg/L	33	0.01	0.01	0.16	0.00	0.03

SITE 81		01/19/99 - 09/10/18			Samples 159		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	102	133.332	136.5	247	59	45.678
Arsenic	mg/L	16	0.001	0.001065	0.0024	0.00047	0.001
Cadmium	mg/L	33	0.001	0.0008	0.005	0.00018	0.002
Chlorophyll-a (correEDed)	ug/L	37	4.619	4.7	15.8	1	4.090
Copper	mg/L	33	0.003	0.00332	0.01	0.00034	0.004
Dissolved Oxygen	% Saturation	15	71.412	71.1	109.1	25	18.708
Fecal Coliform	cfu/100mL	38	62.238	55	1600	3	376.501
Lead	mg/L	33	0.002	0.0013	0.0236	0.00033	0.004
Nitrogen, Ammonia	mg/L	153	0.026	0.031	0.14	0.0025	0.029
Nitrogen, nitrate + nitrite	mg/L	156	0.017	0.0215	0.244	0.002	0.039
Nitrogen, Total	mg/L	157	0.770	0.838	1.32	0.0025	0.193
Nitrogen, Total Kjeldahl	mg/L	141	0.815	0.82	1.3	0.26	0.153
pH	None	145	7.621	7.7	8.3	6.54	0.375
Phosphorus, orthophosphate	mg/L	156	0.003	0.002	0.082	0.001	0.013
Phosphorus, Total	mg/L	145	0.021	0.021	0.21	0.002	0.022
Salinity	ppth	10	None	None	1	0.1	0.267
Specific Conductivity	umho/cm	155	401.519	401	1588	151	220.193
Temperature	deg C	156	25.274	26.19	33.2	15.8	3.973
Total Hardness	mg/L	42	156.297	173.3	311	60	60.350
Total Suspended Solids	mg/L	142	1.633	1.5	6	0.3	1.005
Turbidity	NTU	159	1.436	1.4	8.7	0.3	0.952
Zinc	mg/L	33	0.007	0.008	0.0429	0.00176	0.007

• Sites C18G92 and C18S46 were substitued by Sites 81 and 92 for the September 2015- October 2016 permit cycle

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Monitoring Data Summary
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SITE 38B		01/21/99 - 09/28/18			Samples 96		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	28	138	135	291	62	55
Arsenic	mg/L	76	0.0025	0.0025	0.0160	0.0005	0.0025
Cadmium	mg/L	93	0.0005	0.0003	0.0050	0.0001	0.0017
Chlorophyll-a (corrected)	ug/L	83	6.3	6.9	70.7	1.0	11.3
Copper	mg/L	91	0.0026	0.0022	0.0100	0.0005	0.0031
Dissolved Oxygen	% Saturation	13	66.0	77.7	137.8	31.6	30.8
Fecal Coliform	cfu/100mL	34	66	80	1090	2	211
Lead	mg/L	93	0.0021	0.0025	0.0152	0.0003	0.0019
Nitrogen, Ammonia	mg/L	92	0.070	0.071	0.830	0.008	0.171
Nitrogen, nitrate + nitrite	mg/L	86	0.189	0.225	1.400	0.006	0.249
Nitrogen, Total	mg/L	82	1.64	1.56	4.05	0.65	0.74
Nitrogen, Total Kjeldahl	mg/L	94	1.40	1.31	4.00	0.28	0.76
pH	None	88	7.6	7.6	14.0	6.6	0.8
Phosphorus, orthophosphate	mg/L	89	0.039	0.049	0.540	0.002	0.067
Phosphorus, Total	mg/L	84	0.104	0.116	0.891	0.019	0.138
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	86	694	723	1834	2	407
Temperature	deg C	89	24.8	25.3	33.4	16.7	4.2
Total Hardness	mg/L	89	208	205	412	59	86
Total Suspended Solids	mg/L	91	9.8	10.5	60.0	1.0	11.8
Turbidity	NTU	92	10.0	10.9	69.9	0.6	13.9
Zinc	mg/L	91	0.0064	0.0050	0.0894	0.0013	0.0116

SITE 37B		01/21/99 - 09/28/18			Samples 93		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	30	159	167	238	103	36
Arsenic	mg/L	74	0.0022	0.0025	0.0071	0.0002	0.0013
Cadmium	mg/L	90	0.0005	0.0003	0.0050	0.0001	0.0016
Chlorophyll-a (corrected)	ug/L	80	4.2	4.3	22.3	0.4	4.4
Copper	mg/L	90	0.0026	0.0025	0.0100	0.0005	0.0029
Dissolved Oxygen	% Saturation	12	65.4	71.1	97.1	31.0	20.8
Fecal Coliform	cfu/100mL	32	48	44	300	10	88
Lead	mg/L	90	0.0021	0.0025	0.0155	0.0005	0.0019
Nitrogen, Ammonia	mg/L	92	0.065	0.066	0.332	0.008	0.063
Nitrogen, nitrate + nitrite	mg/L	81	0.176	0.200	1.320	0.010	0.216
Nitrogen, Total	mg/L	82	1.22	1.20	6.89	0.20	0.84
Nitrogen, Total Kjeldahl	mg/L	91	1.05	0.99	6.70	0.13	0.78
pH	None	85	7.4	7.5	9.6	2.8	0.6
Phosphorus, orthophosphate	mg/L	88	0.028	0.039	0.193	0.001	0.036
Phosphorus, Total	mg/L	80	0.074	0.082	1.540	0.006	0.188
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	86	677	699	1198	163	176
Temperature	deg C	86	25.2	26.1	32.2	16.8	3.9
Total Hardness	mg/L	87	214	219	305	124	42
Total Suspended Solids	mg/L	90	4.9	5.4	43.3	1.0	7.6
Turbidity	NTU	90	5.4	5.6	87.0	0.4	13.4
Zinc	mg/L	89	0.0062	0.0050	0.1100	0.0013	0.0132

Table 5-6
Monitoring Data Summary
C-51 Watershed
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SITE C51S155		01/21/99 - 09/13/18			Samples 168		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	86	161	163	216	100	24
Arsenic	mg/L	14	0.0014	0.0016	0.0029	0.0005	0.0008
Cadmium	mg/L	30	0.0015	0.0008	0.0050	0.0002	0.0022
Chlorophyll-a (corrected)	ug/L	31	1.7	3.3	45.0	0.0	8.6
Copper	mg/L	29	0.0051	0.0064	0.0230	0.0017	0.0047
Dissolved Oxygen	% Saturation	22	#NUM!	0.0	109.4	0.0	41.8
Fecal Coliform	cfu/100mL	29	148	150	2000	2	388
Lead	mg/L	30	0.0022	0.0039	0.0152	0.0005	0.0030
Nitrogen, Ammonia	mg/L	163	0.047	0.061	0.520	0.003	0.069
Nitrogen, nitrate + nitrite	mg/L	161	0.109	0.195	20.900	0.003	1.641
Nitrogen, Total	mg/L	162	1.14	1.14	21.79	0.15	1.68
Nitrogen, Total Kjeldahl	mg/L	127	0.96	0.94	3.87	0.41	0.37
pH	None	165	7.6	7.6	8.5	6.2	0.4
Phosphorus, orthophosphate	mg/L	166	0.023	0.032	0.279	0.001	0.041
Phosphorus, Total	mg/L	155	0.065	0.066	0.200	0.003	0.034
Salinity	ppth	1	0.3300	0.3300	0.3300	0.3300	None
Specific Conductivity	umho/cm	167	590	613	1681	6	185
Temperature	ECg C	167	25.2	25.9	56.3	15.3	4.6
Total Hardness	mg/L	40	172	199	337	1	53
Total SuspenECd Solids	mg/L	164	3.6	4.0	47.0	1.0	6.0
Turbidity	NTU	168	4.7	4.3	59.4	1.1	8.5
Zinc	mg/L	30	0.0079	0.0100	0.0310	0.0032	0.0056

Table 5-6
Monitoring Data Summary
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SITE 69 (Lox)		11/20/03 - 09/10/18			Samples 151		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	141	150	151	245	74	37
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	0	None	None	None	None	None
Chlorophyll-a (corrected)	ug/L	139	2.9	3.0	19.5	0.1	3.7
Copper	mg/L	0	None	None	None	None	None
Dissolved Oxygen	% Saturation	59	43.6	46.1	69.6	12.0	13.3
Fecal Coliform	cfu/100mL	141	30	26	13800	3	1164
Lead	mg/L	0	None	None	None	None	None
Nitrogen, Ammonia	mg/L	137	0.086	0.090	0.471	0.025	0.060
Nitrogen, nitrate + nitrite	mg/L	141	0.061	0.061	0.262	0.007	0.048
Nitrogen, Total	mg/L	141	1.00	0.97	38.00	0.52	3.13
Nitrogen, Total Kjeldahl	mg/L	124	0.88	0.90	2.52	0.50	0.29
pH	None	147	7.2	7.3	8.1	6.3	0.3
Phosphorus, orthophosphate	mg/L	141	0.011	0.012	0.104	0.001	0.015
Phosphorus, Total	mg/L	141	0.038	0.035	0.246	0.003	0.031
Salinity	ppth	113	0.29	0.22	11.40	0.10	1.71
Specific Conductivity	umho/cm	111	587	481	19200	218	2942
Temperature	deg C	142	24.9	24.8	31.2	17.0	3.7
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	141	2.1	2.1	21.8	0.5	2.3
Turbidity	NTU	89	3.2	3.2	7.2	1.5	1.1
Zinc	mg/L	8	0.0080	0.0100	0.0100	0.0050	0.0024

SITE 30		05/10/00 - 07/10/18			Samples 90		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	82	122	125	137	79	9
Arsenic	mg/L	6	0.0035	0.0042	0.0047	0.0021	0.0011
Cadmium	mg/L	8	0.0027	0.0050	0.0080	0.0008	0.0027
Chlorophyll-a (corrected)	ug/L	78	4.0	4.4	36.3	0.5	4.5
Copper	mg/L	7	0.0116	0.0100	0.0900	0.0017	0.0319
Dissolved Oxygen	% Saturation	27	77.0	83.5	92.9	15.6	14.6
Fecal Coliform	cfu/100mL	88	13	13	616	1	95
Lead	mg/L	7	0.0040	0.0050	0.1020	0.0011	0.0375
Nitrogen, Ammonia	mg/L	59	0.049	0.040	0.300	0.010	0.088
Nitrogen, nitrate + nitrite	mg/L	90	0.011	0.010	0.146	0.003	0.027
Nitrogen, Total	mg/L	89	0.29	0.31	2.04	0.02	0.41
Nitrogen, Total Kjeldahl	mg/L	79	0.34	0.30	2.02	0.10	0.40
pH	None	90	7.8	7.8	8.3	7.1	0.2
Phosphorus, orthophosphate	mg/L	82	0.006	0.005	0.100	0.001	0.013
Phosphorus, Total	mg/L	90	0.026	0.024	0.130	0.010	0.017
Salinity	ppth	67	30.01	32.00	37.90	15.60	5.17
Specific Conductivity	umho/cm	78	35857	48446	56789	281	12385
Temperature	deg C	88	25.6	26.1	32.3	17.7	3.7
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	90	5.4	5.3	15.6	2.0	3.1
Turbidity	NTU	90	2.9	2.9	7.6	1.1	1.3
Zinc	mg/L	8	0.0182	0.0100	0.1210	0.0016	0.0470

Table 5-6
Monitoring Data Summary
Loxahatchee River Watershed
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SITE 51		05/11/00 - 07/10/18			Samples 89		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	81	119	123	163	62	16
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	8	0.0033	0.0050	0.0440	0.0008	0.0146
Chlorophyll-a (corrected)	ug/L	79	4.0	4.0	62.0	0.5	7.4
Copper	mg/L	7	0.0088	0.0050	0.0700	0.0014	0.0296
Dissolved Oxygen	% Saturation	27	83.2	86.8	98.5	41.3	13.2
Fecal Coliform	cfu/100mL	88	15	14	420	1	63
Lead	mg/L	7	0.0034	0.0050	0.0340	0.0011	0.0119
Nitrogen, Ammonia	mg/L	57	0.031	0.030	0.140	0.002	0.028
Nitrogen, nitrate + nitrite	mg/L	89	0.008	0.006	0.068	0.002	0.016
Nitrogen, Total	mg/L	86	0.35	0.30	2.29	0.10	0.45
Nitrogen, Total Kjeldahl	mg/L	78	0.35	0.30	2.23	0.10	0.46
pH	None	90	7.8	7.9	8.4	6.7	0.3
Phosphorus, orthophosphate	mg/L	86	0.006	0.006	0.177	0.001	0.020
Phosphorus, Total	mg/L	89	0.025	0.025	0.222	0.006	0.025
Salinity	ppth	71	23.92	31.10	37.50	0.60	9.27
Specific Conductivity	umho/cm	72	37460	47750	56271	1118	13459
Temperature	deg C	88	24.7	25.2	31.1	15.9	3.8
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	89	5.5	5.3	43.5	0.8	6.4
Turbidity	NTU	89	3.2	3.2	7.2	1.5	1.1
Zinc	mg/L	8	0.0080	0.0100	0.0100	0.0050	0.0024

SITE 62 (Lox)		05/31/00 - 09/10/18			Samples 152		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	144	132	135	226	64	28
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	8	0.0027	0.0050	0.0080	0.0008	0.0027
Chlorophyll-a (corrected)	ug/L	135	5.4	5.8	61.9	0.5	6.1
Copper	mg/L	7	0.0071	0.0100	0.0500	0.0017	0.0184
Dissolved Oxygen	% Saturation	48	66.5	69.3	93.9	37.3	12.9
Fecal Coliform	cfu/100mL	151	61	64	2300	1	230
Lead	mg/L	7	0.0030	0.0050	0.0130	0.0011	0.0042
Nitrogen, Ammonia	mg/L	142	0.054	0.050	0.650	0.010	0.080
Nitrogen, nitrate + nitrite	mg/L	152	0.033	0.048	0.182	0.003	0.040
Nitrogen, Total	mg/L	152	0.79	0.77	3.93	0.23	0.58
Nitrogen, Total Kjeldahl	mg/L	141	0.72	0.70	3.93	0.20	0.59
pH	None	152	7.6	7.5	73.8	7.0	5.4
Phosphorus, orthophosphate	mg/L	150	0.021	0.025	0.121	0.002	0.017
Phosphorus, Total	mg/L	140	0.046	0.047	0.480	0.006	0.044
Salinity	ppth	137	6.91	10.40	35.70	0.20	9.73
Specific Conductivity	umho/cm	122	12735	18777	53860	316	15426
Temperature	deg C	147	24.9	25.0	32.8	16.1	3.9
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	140	4.2	4.0	23.2	1.0	3.1
Turbidity	NTU	152	2.9	2.7	22.0	1.2	2.1
Zinc	mg/L	8	0.0124	0.0100	0.0480	0.0050	0.0185

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SITE 72		05/11/00 - 09/10/18			Samples 159		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	150	122	128	178	28	21
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	8	0.0035	0.0050	0.0720	0.0008	0.0244
Chlorophyll-a (corrected)	ug/L	153	8.3	9.0	97.9	0.5	11.8
Copper	mg/L	7	0.0076	0.0100	0.0600	0.0010	0.0246
Dissolved Oxygen	% Saturation	60	76.7	82.1	128.1	27.2	17.2
Fecal Coliform	cfu/100mL	157	80	87	1336	1	214
Lead	mg/L	7	0.0044	0.0050	0.0640	0.0011	0.0229
Nitrogen, Ammonia	mg/L	147	0.090	0.100	3.000	0.015	0.254
Nitrogen, nitrate + nitrite	mg/L	158	0.020	0.026	0.172	0.000	0.029
Nitrogen, Total	mg/L	157	0.61	0.66	2.88	0.10	0.38
Nitrogen, Total Kjeldahl	mg/L	140	0.58	0.62	2.85	0.10	0.38
pH	None	159	7.7	7.8	8.2	6.8	0.2
Phosphorus, orthophosphate	mg/L	156	0.008	0.009	0.100	0.001	0.012
Phosphorus, Total	mg/L	158	0.037	0.036	0.640	0.006	0.050
Salinity	ppth	138	17.65	27.65	37.98	0.04	10.38
Specific Conductivity	umho/cm	123	26870	41966	63745	500	16146
Temperature	deg C	154	25.8	27.2	32.5	16.0	3.7
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	157	4.7	4.4	22.4	0.5	4.2
Turbidity	NTU	158	3.0	3.1	8.7	0.3	1.3
Zinc	mg/L	8	0.0164	0.0100	0.2780	0.0050	0.0941

Table 5-6
Monitoring Data Summary
Lake Worth Lagoon North Watershed

LWL-1		01/26/99 - 09/20/18			Samples 129		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	7	0.0039	0.0025	0.0089	0.0023	0.0029
Cadmium	mg/L	7	0.0009	0.0006	0.0025	0.0002	0
DAlorophyll-a (corrected)	ug/L	102	5.1	5.1	19.7	0.0	3.4
Copper	mg/L	31	0.0029	0.0030	0.0048	0.0017	0.0008
Dissolved Oxygen	mg/L	17	#NUM!	0.0	104.1	0.0	49.7
Fecal Coliform	cfu/100mL	2	14	26	47	4	30
Lead	mg/L	7	0.0031	0.0025	0.0246	0.0013	0.0085
Nitrogen, Ammonia	mg/L	120	0.011	0.010	0.260	0.001	0.030
Nitrogen, nitrate + nitrite	mg/L	100	0.006	0.004	0.120	0.003	0.020
Nitrogen, Total	mg/L	97	0.35	0.36	0.96	0.00	0.18
Nitrogen, Total Kjeldahl	mg/L	96	0.36	0.35	0.92	0.09	0.17
pH	None	126	7.9	7.9	8.9	7.2	0.2
Phosphorus, orthophosphate	mg/L	113	0.007	0.008	0.104	0.001	0.013
Phosphorus, Total	mg/L	111	0.032	0.033	0.120	0.002	0.017
Salinity	ppth	89	30.48	31.40	36.10	21.10	3.27
Specific Conductivity	umho/cm	128	#REF!	47712	67154	4184	6812
Temperature	deg C	128	25.8	26.3	32.8	14.6	4.5
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	95	4.2	4.0	33.0	1.5	6.0
Turbidity	NTU	126	1.8	2.0	6.0	0.1	0.8
Zinc	mg/L	6	0.0041	0.0042	0.0050	0.0034	0.0009

SITE 11		01/26/99 - 09/20/18			Samples 152		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	1	130	130	130	130	None
Arsenic	mg/L	11	0.0281	0.0071	2.5000	0.0028	1.1648
Cadmium	mg/L	24	0.0025	0.0029	0.2500	0.0001	0.0835
Chlorophyll-a (corrected)	ug/L	133	3.3	3.1	29.9	0.1	4.5
Copper	mg/L	22	0.0162	0.0099	6.2500	0.0017	1.5079
Dissolved Oxygen	mg/L	15	95.0	95.4	111.0	73.0	9.6
Fecal Coliform	DZu/100mL	39	16	15	170	2	38
Lead	mg/L	23	0.0090	0.0050	2.5000	0.0002	0.8568
Nitrogen, Ammonia	mg/L	143	0.040	0.040	0.250	0.007	0.044
Nitrogen, nitrate + nitrite	mg/L	123	0.051	0.050	1.200	0.007	0.174
Nitrogen, Total	mg/L	123	0.43	0.52	1.87	0.04	0.33
Nitrogen, Total Kjeldahl	mg/L	143	0.36	0.39	1.86	0.04	0.30
pH	None	143	7.8	7.9	8.7	6.6	0.3
Phosphorus, orthophosphate	mg/L	138	0.013	0.023	0.650	0.001	0.059
Phosphorus, Total	mg/L	143	0.035	0.035	1.110	0.003	0.100
Salinity	ppth	123	30.48	31.73	35.92	9.54	4.16
Specific Conductivity	umho/cm	143	#REF!	48163	54441	425	8972
Temperature	deg C	131	25.6	25.7	32.4	16.5	3.8
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	15	16.7	25.0	59.0	1.0	16.3
Turbidity	NTU	147	1.7	2.0	12.4	0.1	1.5
Zinc	mg/L	19	0.0319	0.0100	5.0000	0.0034	1.8660

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SITE 13		05/11/00 - 09/20/18			Samples 146		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	1	140	140	140	140	None
Arsenic	mg/L	13	0.0174	0.0034	2.5000	0.0026	1.0943
Cadmium	mg/L	20	0.0020	0.0008	0.2500	0.0001	0.0909
Chlorophyll-a (corrected)	ug/L	132	4.0	3.9	24.1	0.1	4.5
Copper	mg/L	18	0.0154	0.0056	12.9000	0.0017	3.1986
Dissolved Oxygen	mg/L	15	90.8	93.1	109.5	70.5	12.3
Fecal Coliform	cfu/100mL	36	53	51	3200	6	533
Lead	mg/L	19	0.0080	0.0050	2.5000	0.0002	0.9351
Nitrogen, Ammonia	mg/L	141	0.048	0.048	13.000	0.007	1.091
Nitrogen, nitrate + nitrite	mg/L	127	0.056	0.050	1.517	0.003	0.225
Nitrogen, Total	mg/L	130	0.50	0.58	2.14	0.06	0.38
Nitrogen, Total Kjeldahl	mg/L	143	0.44	0.48	1.83	0.04	0.32
pH	None	137	7.8	7.8	8.4	6.4	0.2
Phosphorus, orthophosphate	mg/L	135	0.015	0.022	0.650	0.001	0.062
Phosphorus, Total	mg/L	138	0.040	0.041	1.400	0.003	0.134
Salinity	ppth	122	25.11	30.08	38.30	0.63	7.58
Specific Conductivity	umho/cm	135	#REF!	46665	59740	531	12034
Temperature	deg C	135	25.8	26.2	32.8	16.0	3.8
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	11	24.9	32.0	56.0	4.0	17.1
Turbidity	NTU	139	1.9	2.2	13.0	0.1	1.4
Zinc	mg/L	14	0.0478	0.0109	5.0000	0.0034	2.1186

LWL-4		04/05/04 - 09/20/18			Samples 126		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	7	0.0041	0.0025	0.0090	0.0023	0.0033
Cadmium	mg/L	7	0.0004	0.0003	0.0017	0.0003	0
Chlorophyll-a (corrected)	ug/L	103	2.6	2.2	226.0	0.1	22.1
Copper	mg/L	30	0.0019	0.0018	0.0031	0.0009	0.0006
Dissolved Oxygen	mg/L	7	104.1	97.8	132.3	91.2	13.9
Fecal Coliform	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	7	0.0025	0.0025	0.0157	0.0005	0.0052
Nitrogen, Ammonia	mg/L	118	0.009	0.009	0.390	0.003	0.037
Nitrogen, nitrate + nitrite	mg/L	107	0.004	0.003	0.050	0.003	0.008
Nitrogen, Total	mg/L	106	0.28	0.28	0.74	0.00	0.15
Nitrogen, Total Kjeldahl	mg/L	94	0.29	0.27	0.73	0.13	0.15
pH	None	123	8.0	8.0	9.0	7.5	0.2
Phosphorus, orthophosphate	mg/L	108	0.004	0.004	0.183	0.001	0.018
Phosphorus, Total	mg/L	106	0.023	0.021	0.064	0.011	0.011
Salinity	ppth	90	32.44	33.20	36.40	24.70	2.83
Specific Conductivity	umho/cm	125	48359	50330	68870	4594	6292
Temperature	deg C	125	25.3	25.6	32.2	15.2	4.4
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	95	6.7	7.0	52.0	1.5	7.9
Turbidity	NTU	124	2.6	2.6	10.3	0.9	1.6
Zinc	mg/L	6	0.0051	0.0042	0.0197	0.0034	0.0065

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LWL-8		01/26/99 - 09/19/18			Samples 150		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	6	0.0043	0.0045	0.0098	0.0023	0.0032
Cadmium	mg/L	18	0.0016	0.0035	0.0060	0.0003	0.0023
Chlorophyll-a (corrected)	ug/L	115	5.4	5.2	41.2	0.5	7.6
Copper	mg/L	38	0.0029	0.0017	0.0500	0.0012	0.0110
Dissolved Oxygen	mg/L	17	94.3	95.7	135.8	61.2	15.6
Fecal Coliform	cfu/100mL	12	21	16	700	2	196
Lead	mg/L	17	0.0041	0.0050	0.0530	0.0011	0.0121
Nitrogen, Ammonia	mg/L	137	0.027	0.029	3.046	0.001	0.273
Nitrogen, nitrate + nitrite	mg/L	129	0.029	0.043	0.430	0.003	0.061
Nitrogen, Total	mg/L	118	0.53	0.52	1.67	0.02	0.32
Nitrogen, Total Kjeldahl	mg/L	102	0.45	0.47	1.50	0.13	0.31
pH	None	147	7.8	7.9	10.6	1.9	0.6
Phosphorus, orthophosphate	mg/L	131	0.015	0.017	0.130	0.001	0.017
Phosphorus, Total	mg/L	129	0.049	0.050	0.270	0.012	0.033
Salinity	ppth	98	24.76	28.35	36.40	9.32	7.47
Specific Conductivity	umho/cm	150	37059.47	42350	63187	2762	11437
Temperature	deg C	149	25.3	25.9	34.1	12.1	4.4
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	118	8.8	8.0	82.0	1.0	12.6
Turbidity	NTU	149	5.0	5.5	14.7	1.2	2.7
Zinc	mg/L	18	0.0088	0.0100	0.1200	0.0034	0.0271

SITE 18C		01/30/04 - 09/19/18			Samples 130		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	1	140	140	140	140	None
Arsenic	mg/L	12	0.0183	0.0032	2.5000	0.0023	1.1288
Cadmium	mg/L	11	0.0020	0.0006	0.2500	0.0001	0.1166
Chlorophyll-a (corrected)	ug/L	120	5.6	5.9	32.0	0.1	5.8
Copper	mg/L	11	0.0167	0.0031	4.8000	0.0017	1.5902
Dissolved Oxygen	mg/L	14	95.9	97.8	156.6	62.4	21.3
Fecal Coliform	cfu/100mL	25	26	20	300	2	75
Lead	mg/L	11	0.0179	0.0026	2.5000	0.0009	1.1655
Nitrogen, Ammonia	mg/L	116	0.052	0.059	0.310	0.009	0.056
Nitrogen, nitrate + nitrite	mg/L	115	0.104	0.101	1.677	0.006	0.271
Nitrogen, Total	mg/L	111	0.80	0.89	20.80	0.03	1.97
Nitrogen, Total Kjeldahl	mg/L	118	0.66	0.73	20.70	0.04	1.90
pH	None	113	7.8	7.8	9.4	7.1	0.3
Phosphorus, orthophosphate	mg/L	120	0.023	0.036	0.156	0.001	0.025
Phosphorus, Total	mg/L	115	0.065	0.072	1.280	0.001	0.125
Salinity	ppth	89	22.23	28.60	3388.00	4.74	356.75
Specific Conductivity	umho/cm	101	31659	43154	55098	537	15192
Temperature	deg C	111	26.5	27.9	33.9	14.1	4.5
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	2	42.0	42.0	42.0	42.0	0.0
Turbidity	NTU	124	9.0	11.2	222.0	0.1	20.5
Zinc	mg/L	7	0.1302	0.0190	5.0000	0.0034	2.6672

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SITE 18D		07/28/05 - 09/19/18			Samples 116		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	11	0.0210	0.0048	2.5000	0.0023	1.1660
Cadmium	mg/L	11	0.0025	0.0006	0.2500	0.0001	0.1165
Chlorophyll-a (corrected)	ug/L	107	5.5	6.0	41.1	0.1	8.5
Copper	mg/L	11	0.0147	0.0021	3.0000	0.0017	0.9669
Dissolved Oxygen	mg/L	14	105.6	105.6	132.8	77.3	15.0
Fecal Coliform	CRu/100mL	15	18	20	400	1	101
Lead	mg/L	11	0.0159	0.0026	2.5000	0.0002	1.1656
Nitrogen, Ammonia	mg/L	110	0.046	0.051	0.400	0.007	0.061
Nitrogen, nitrate + nitrite	mg/L	96	0.071	0.064	1.477	0.006	0.252
Nitrogen, Total	mg/L	88	0.59	0.68	3.87	0.03	0.52
Nitrogen, Total Kjeldahl	mg/L	106	0.49	0.55	3.86	0.04	0.44
pH	mg/L	87	7.9	7.9	9.3	7.3	0.2
Phosphorus, orthophosphate	mg/L	106	0.014	0.023	0.500	0.000	0.055
Phosphorus, Total	mg/L	110	0.061	0.061	1.620	0.004	0.180
Salinity	mg/L	82	26.41	30.56	352.20	9.36	36.75
SpeCRfic Conductivity	mg/L	84	38430	46127	54782	3311	12125
Temperature	mg/L	99	26.8	26.9	263.7	16.6	24.2
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	0	None	None	None	None	None
Turbidity	mg/L	113	4.7	6.4	72.2	0.1	7.2
Zinc	mg/L	6	0.1472	2.5036	5.0000	0.0034	2.7361

LWL-11		01/26/99 - 09/19/18			Samples 137		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	6	0.0040	0.0025	0.0173	0.0023	0.0060
Cadmium	mg/L	6	0.0004	0.0004	0.0006	0.0003	0
Chlorophyll-a (corrected)	ug/L	105	5.6	6.0	59.2	0.0	7.9
Copper	mg/L	29	0.0019	0.0017	0.0160	0.0008	0.0035
Dissolved Oxygen	mg/L	17	#NUM!	0.0	123.3	0.0	51.1
Fecal Coliform	cfu/100mL	3	12	20	63	1	32
Lead	mg/L	6	0.0035	0.0025	0.0198	0.0024	0.0071
Nitrogen, Ammonia	mg/L	127	0.018	0.014	0.410	0.001	0.050
Nitrogen, nitrate + nitrite	mg/L	117	0.016	0.016	0.190	0.003	0.047
Nitrogen, Total	mg/L	111	0.48	0.54	1.54	0.00	0.28
Nitrogen, Total Kjeldahl	mg/L	92	0.47	0.49	1.40	0.05	0.27
pH	None	136	7.9	8.0	10.7	1.8	0.6
Phosphorus, orthophosphate	mg/L	121	0.009	0.011	0.086	0.001	0.014
Phosphorus, Total	mg/L	117	0.046	0.046	0.180	0.002	0.024
Salinity	ppth	95	26.92	29.40	36.40	11.30	6.29
Specific Conductivity	umho/cm	137	40045.92	44600	65170	3117	10211
Temperature	deg C	137	25.8	26.5	233.0	13.0	18.3
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	103	8.4	8.0	65.0	1.0	8.6
Turbidity	NTU	137	4.9	4.8	29.5	0.8	3.6
Zinc	mg/L	6	0.0041	0.0042	0.0050	0.0034	0.0009

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LWL-13		04/05/04 - 09/18/18			Samples 132		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	7	0.0041	0.0025	0.0095	0.0023	0.0033
Cadmium	mg/L	7	0.0004	0.0003	0.0006	0.0003	0
Chlorophyll-a (corrected)	ug/L	109	5.0	4.3	39.5	1.6	6.0
Copper	mg/L	31	0.0017	0.0017	0.0039	0.0009	0.0007
Dissolved Oxygen	mg/L	15	#NUM!	0.0	112.6	0.0	51.7
Fecal Coliform	CZu/100mL	3	100	100	100	100	0
Lead	mg/L	7	0.0028	0.0025	0.0229	0.0005	0.0078
Nitrogen, Ammonia	mg/L	127	0.014	0.011	0.500	0.002	0.060
Nitrogen, nitrate + nitrite	mg/L	116	0.010	0.006	0.200	0.003	0.046
Nitrogen, Total	mg/L	108	0.39	0.39	1.42	0.00	0.28
Nitrogen, Total Kjeldahl	mg/L	95	0.39	0.35	1.40	0.16	0.26
pH	None	131	8.0	8.0	9.2	7.0	0.2
Phosphorus, orthophosphate	mg/L	122	0.007	0.007	0.067	0.001	0.013
Phosphorus, Total	mg/L	114	0.034	0.032	0.170	0.013	0.022
Salinity	ppth	95	29.08	31.70	37.20	14.40	5.67
Specific Conductivity	umho/cm	132	43938.29	47661	385822	3532	31118
Temperature	deg C	132	25.5	26.6	33.3	11.7	4.3
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	99	5.9	6.0	28.0	1.0	5.4
Turbidity	NTU	122	2.9	2.9	12.0	0.7	1.8
Zinc	mg/L	6	0.0041	0.0042	0.0050	0.0034	0.0009

Table 5-6
Monitoring Data Summary
Lake Worth Lagoon South Watershed
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LWL-18		05/11/00 - 09/18/18			Samples 138		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	7	0.0033	0.0025	0.0087	0.0023	0.0024
Cadmium	mg/L	15	0.0020	0.0008	0.0050	0.0002	0.0022
Chlorophyll-a (corrected)	ug/L	110	8.3	5.0	58.1	1.6	8.9
Copper	mg/L	37	0.0053	0.0033	0.0500	0.0017	0.0080
Dissolved Oxygen	mg/L	12	92.1	87.9	131.9	62.4	18.3
Fecal Coliform	cfu/100mL	8	40	17	180	4	59
Lead	mg/L	14	0.0056	0.0025	0.0250	0.0008	0.0070
Nitrogen, Ammonia	mg/L	130	0.036	0.022	0.410	0.003	0.047
Nitrogen, nitrate + nitrite	mg/L	122	0.035	0.020	0.210	-0.005	0.042
Nitrogen, Total	mg/L	113	0.52	0.44	1.51	0.00	0.27
Nitrogen, Total Kjeldahl	mg/L	106	0.86	0.44	39.00	0.07	3.75
pH	None	137	7.9	7.9	9.1	6.5	0.3
Phosphorus, orthophosphate	mg/L	128	0.024	0.015	0.160	0.001	0.026
Phosphorus, Total	mg/L	122	0.052	0.043	0.230	0.001	0.034
Salinity	ppth	94	28.45	30.30	36.70	9.37	6.38
Specific Conductivity	umho/cm	138	43157	45753	64472	3790	9994
Temperature	deg C	137	26.6	26.9	33.6	16.3	4.1
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	106	10.8	8.0	56.0	1.0	8.9
Turbidity	NTU	127	4.2	3.8	17.0	0.7	2.2
Zinc	mg/L	14	0.0204	0.0100	0.1160	0.0019	0.0297

Table 5-6
Monitoring Data Summary
Hillsboro Watershed
(Page 20 of 24)

1		02/22/06 - 08/27/18			Samples 49		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	0	None	None	None	None	None
Chlorophyll-a (corrected)	ug/L	41	5.5	5.7	27.1	1.2	4.7
Copper	mg/L	0	None	None	None	None	None
Dissolved Oxygen	mg/L	10	66.6	68.8	83.9	46.5	12.5
Fecal Coliform	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	0	None	None	None	None	None
Nitrogen, Ammonia	mg/L	6	0.069	0.069	0.143	0.041	0.037
Nitrogen, nitrate + nitrite	mg/L	8	0.040	0.055	0.488	0.001	0.159
Nitrogen, Total	mg/L	35	0.80	0.83	1.75	0.25	0.40
Nitrogen, Total Kjeldahl	mg/L	8	0.87	1.14	1.65	0.28	0.49
pH	None	10	7.5	7.6	7.7	7.4	0.1
Phosphorus, orthophosphate	mg/L	0	None	None	None	None	None
Phosphorus, Total	mg/L	34	0.097	0.097	0.542	0.045	0.081
Salinity	ppth	48	10.51	18.40	33.70	0.18	9.77
Specific Conductivity	umho/cm	49	18763.80	30000	49200	659	14600
Temperature	deg C	10	26.7	28.6	31.6	20.1	4.0
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	0	None	None	None	None	None
Turbidity	NTU	10	1.9	1.8	4.4	1.2	1.0
Zinc	mg/L	0	None	None	None	None	None

2		02/22/06 - 08/29/18			Samples 49		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	0	None	None	None	None	None
Chlorophyll-a (corrected)	ug/L	47	6.6	6.0	37.2	0.8	8.7
Copper	mg/L	0	None	None	None	None	None
Dissolved Oxygen	mg/L	10	70.9	79.2	95.8	40.3	21.6
Fecal Coliform	DZu/100mL	0	None	None	None	None	None
Lead	mg/L	0	None	None	None	None	None
Nitrogen, Ammonia	mg/L	6	0.060	0.053	0.102	0.038	0.024
Nitrogen, nitrate + nitrite	mg/L	8	0.064	0.041	0.315	0.022	0.108
Nitrogen, Total	mg/L	36	1.26	1.28	1.68	0.67	0.21
Nitrogen, Total Kjeldahl	mg/L	8	1.12	1.29	1.53	0.59	0.34
pH	None	10	7.6	7.6	7.9	7.3	0.2
Phosphorus, orthophosphate	mg/L	0	None	None	None	None	None
Phosphorus, Total	mg/L	32	0.084	0.098	0.270	0.025	0.051
Salinity	ppth	20	0.30	0.32	0.38	0.21	0.05
Specific Conductivity	umho/cm	49	586.05	632	806	66	123
Temperature	deg C	10	26.6	27.9	31.7	20.6	3.8
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	0	None	None	None	None	None
Turbidity	NTU	10	1.2	1.3	3.1	0.6	0.7
Zinc	mg/L	0	None	None	None	None	None

Table 5-6
Monitoring Data Summary
Hillsboro Watershed
(Page 21 of 24)

3		02/22/06 - 12/06/16			**Samples** 44		
		Count	**Geometric Mean**	**Median**	**Max**	**Min**	**Standard Deviation**
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	0	None	None	None	None	None
Chlorophyll-a (corrected)	ug/L	40	7.1109	10.4	33.2	0.8	8.6
Copper	mg/L	0	None	None	None	None	None
Dissolved Oxygen	mg/L	4	61.7	66.3	83.3	39.6	18.1
Fecal Coliform	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	0	None	None	None	None	None
Nitrogen, Ammonia	mg/L	4	0.087	0.083	0.210	0.042	0.075
Nitrogen, nitrate + nitrite	mg/L	4	0.039	0.027	0.156	0.022	0.066
Nitrogen, Total	mg/L	31	1.42	1.42	1.68	1.04	0.15
Nitrogen, Total Kjeldahl	mg/L	3	1.30	1.37	1.53	1.06	0.24
pH	None	4	7.6	7.6	7.8	7.5	0.1
Phosphorus, orthophosphate	mg/L	0	None	None	None	None	None
Phosphorus, Total	mg/L	27	0.098	0.103	0.257	0.039	0.055
Salinity	ppth	15	0.31	0.31	0.38	0.21	0.05
Specific Conductivity	umho/cm	44	647.21	668	834	413	100
Temperature	deg C	4	26.1	27.0	31.6	20.4	4.9
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	0	None	None	None	None	None
Turbidity	NTU	4	0.8	0.9	1.2	0.5	0.3
Zinc	mg/L	0	None	None	None	None	None

S-39		01/03/00 - 09/25/18			**Samples** 224		
		Count	**Geometric Mean**	**Median**	**Max**	**Min**	**Standard Deviation**
Alkalinity	mg/L	209	72.79	119.61	347.40	0.50	61.81
Arsenic	mg/L	2	2.9626	3.1535	4.2340	2.0730	1.5281
Cadmium	mg/L	2	0.1500	0.1500	0.1500	0.1500	0
Chlorophyll-a (corrected)	ug/L	0	None	None	None	None	None
Copper	mg/L	0	None	None	None	None	None
Dissolved Oxygen	mg/L	24	#NUM!	14.6	90.6	0.0	39.8
Fecal Coliform	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	2	0.4000	0.4000	0.4000	0.4000	0.0000
Nitrogen, Ammonia	mg/L	213	0.015	0.017	0.167	0.003	0.021
Nitrogen, nitrate + nitrite	mg/L	223	0.010	0.009	0.875	0.002	0.084
Nitrogen, Total	mg/L	28	0.13	0.94	1.62	0.01	0.63
Nitrogen, Total Kjeldahl	mg/L	224	1.14	1.32	2.71	0.03	0.44
pH	None	224	7.7	7.7	8.5	6.8	0.3
Phosphorus, orthophosphate	mg/L	0	None	None	None	None	None
Phosphorus, Total	mg/L	224	0.018	0.018	0.169	0.001	0.020
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	0	None	None	None	None	None
Temperature	deg C	224	25.2	26.1	31.5	13.7	4.0
Total Hardness	mg/L	145	99.81	140.70	353.83	0.05	63.39
Total Suspended Solids	mg/L	97	1.9	1.5	11.0	0.5	1.7
Turbidity	NTU	222	1.2	1.1	11.3	0.1	1.6
Zinc	mg/L	2	2.0000	2.0000	2.0000	2.0000	0.0000

Table 5-6
Monitoring Data Summary
L-8 Watershed
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SITE Culv10a		01/10/00 - 09/10/18			Samples 219		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	219	114.42	113.16	362.00	0.50	47.29
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	0	None	None	None	None	None
Chlorophyll-a (corrected)	ug/L	11	2.0	2.0	9.3	0.5	3.0
Copper	mg/L	5	2.3733	3.0270	4.5710	0.6000	1.4254
Dissolved Oxygen	mg/L	218	#NUM!	6.7	99.8	0.0	17.8
Fecal Coliform	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	5	0.8600	0.4000	4.7300	0.4000	1.8752
Nitrogen, Ammonia	mg/L	219	0.038	0.032	3.074	0.005	0.322
Nitrogen, nitrate + nitrite	mg/L	219	0.190	0.291	6.557	0.002	0.501
Nitrogen, Total	mg/L	12	2.12	1.78	4.95	1.57	1.00
Nitrogen, Total Kjeldahl	mg/L	209	1.52	1.48	4.78	0.03	0.70
pH	None	218	7.8	7.9	9.2	6.4	0.4
Phosphorus, orthophosphate	mg/L	219	0.047	0.053	0.177	0.002	0.026
Phosphorus, Total	mg/L	219	0.142	0.141	0.669	0.002	0.099
Salinity	ppth	3	0.16	0.16	0.17	0.15	0.01
Specific Conductivity	umho/cm	218	502.23	465	3390	83	319
Temperature	deg C	218	24.1	25.5	31.7	9.0	4.6
Total Hardness	mg/L	72	159.97	146.95	774.00	46.40	99.70
Total Suspended Solids	mg/L	219	24.5	24.0	360.0	0.5	56.3
Turbidity	NTU	219	27.3	28.0	284.0	0.1	47.9
Zinc	mg/L	5	3.1486	2.0000	8.2950	2.0000	2.7690

Table 5-6
Monitoring Data Summary
S-2-6-7 Watershed

SITE S-2		01/25/99 - 09/24/18			Samples 237		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	11	168	156	381	101	104
Arsenic	mg/L	13	0.0027	0.0040	0.0076	0.0008	0.0023
Cadmium	mg/L	12	0.0002	0.0002	0.0005	0.0002	0.0001
Chlorophyll-a (corrected)	ug/L	7	2.6	3.1	52.1	0.5	18.8
Copper	mg/L	13	0.0012	0.0012	0.0030	0.0006	0.0010
Dissolved Oxygen	% Saturation	229	#NUM!	5.9	14.9	0.0	2.6
Fecal Coliform	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	13	0.0004	0.0004	0.0004	0.0004	0.0000
Nitrogen, Ammonia	mg/L	232	0.106	0.110	2.057	0.003	0.382
Nitrogen, nitrate + nitrite	mg/L	232	0.174	0.227	2.726	0.002	0.516
Nitrogen, Total	mg/L	9	1.77	1.45	3.68	1.17	0.88
Nitrogen, Total Kjeldahl	mg/L	218	1.62	1.60	12.81	0.03	1.65
pH	None	230	7.7	7.7	8.7	6.8	0.3
Phosphorus, orthophosphate	mg/L	232	0.033	0.041	0.232	0.001	0.048
Phosphorus, Total	mg/L	232	0.089	0.101	1.653	0.001	0.159
Salinity	ppth	2	0.7200	0.7500	0.9600	0.5400	0.2970
Specific Conductivity	umho/cm	230	746	654	2079	145	422
Temperature	deg C	230	24.7	25.3	32.2	13.0	4.3
Total Hardness	mg/L	3	230	193	496	127	196
Total Suspended Solids	mg/L	232	6.3	6.0	131.2	0.5	13.6
Turbidity	NTU	232	6.0	6.6	70.4	0.1	10.7
Zinc	mg/L	13	0.0022	0.0020	0.0066	0.0020	0.0013

SITE 39		04/18/17 - 09/28/18			Samples 8		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	1	151	151	151	151	None
Arsenic	mg/L	6	0.0313	0.0071	2.2350	0.0007	1.1516
Cadmium	mg/L	6	0.0023	0.0004	0.1950	0.0001	0.1005
Chlorophyll-a (corrected)	ug/L	8	5.9	6.7	12.9	3.0	3.7
Copper	mg/L	6	0.0132	0.0026	0.9750	0.0003	0.5025
Dissolved Oxygen	% Saturation	8	47.3	51.5	84.6	9.8	25.5
Fecal Coliform	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	6	0.0262	0.0048	2.1000	0.0007	1.0825
Nitrogen, Ammonia	mg/L	8	0.156	0.138	0.880	0.049	0.301
Nitrogen, nitrate + nitrite	mg/L	5	0.228	0.270	0.471	0.100	0.176
Nitrogen, Total	mg/L	5	1.62	1.57	2.94	0.96	0.74
Nitrogen, Total Kjeldahl	mg/L	8	0.48	0.98	2.50	0.03	0.85
pH	None	7	7.9	7.7	9.2	7.4	0.6
Phosphorus, orthophosphate	mg/L	8	0.080	0.079	0.204	0.024	0.063
Phosphorus, Total	mg/L	8	0.126	0.116	0.260	0.058	0.075
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	8	574	549	947	374	233
Temperature	deg C	8	25.5	27.5	34.1	17.3	5.8
Total Hardness	mg/L	6	224	234	330	129	71
Total Suspended Solids	mg/L	7	5.9	5.0	17.0	3.0	5.3
Turbidity	NTU	8	6.8	5.8	27.0	2.9	8.4
Zinc	mg/L	6	0.0061	0.0088	0.0110	0.0015	0.0040

Table 5-6
Monitoring Data Summary
S-2-6-7 Watershed
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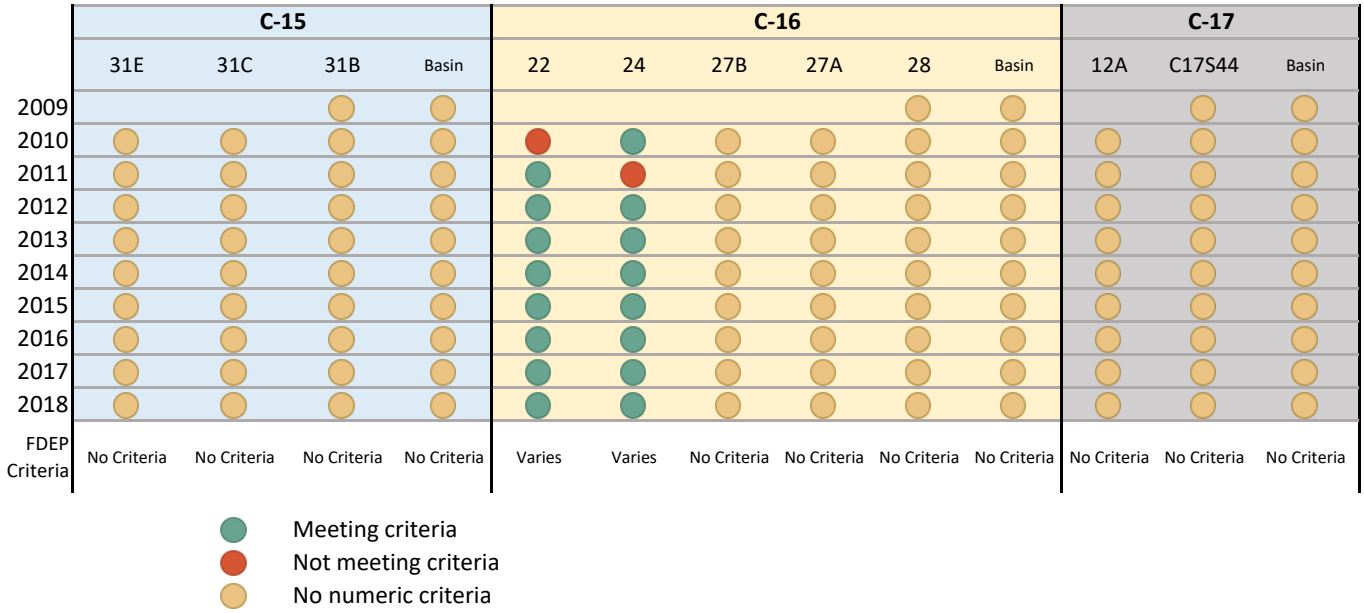
SITE 43		04/18/17 - 09/28/18			Samples 8		
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	6	0.0109	0.0069	2.2350	0.0007	0.9104
Cadmium	mg/L	6	0.0009	0.0004	0.1950	0.0001	0.0795
Chlorophyll-a (corrected)	ug/L	8	6.9	6.8	21.8	2.2	7.2
Copper	mg/L	6	0.0043	0.0026	0.9750	0.0003	0.3973
Dissolved Oxygen	% Saturation	8	44.8	52.2	90.1	19.0	26.6
Fecal Coliform	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	6	0.0262	0.0048	2.1000	0.0007	1.0825
Nitrogen, Ammonia	mg/L	8	0.137	0.145	0.580	0.038	0.174
Nitrogen, nitrate + nitrite	mg/L	8	0.150	0.101	1.200	0.042	0.389
Nitrogen, Total	mg/L	8	1.57	1.34	3.70	1.08	0.90
Nitrogen, Total Kjeldahl	mg/L	8	1.36	1.16	2.50	1.00	0.59
pH	None	7	8.1	7.9	9.1	7.1	0.8
Phosphorus, orthophosphate	mg/L	8	0.052	0.060	0.200	0.003	0.067
Phosphorus, Total	mg/L	8	0.113	0.120	0.220	0.036	0.065
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	8	575	545	954	402	225
Temperature	ECg C	8	25.3	27.0	32.6	17.6	5.5
Total Hardness	mg/L	6	236	241	386	149	93
Total SuspenECd Solids	mg/L	7	6.2	5.5	8.7	4.9	1.6
Turbidity	NTU	8	8.3	7.5	35.0	4.0	10.4
Zinc	mg/L	6	0.0072	0.0110	0.0200	0.0015	0.0071

TABLE 5-7
Summary of Geometric Mean Values for TN, TP, Chl-a
January 1999 - September 2018

Watershed	Site	Total Nitrogen mg/L	Total Phosphorus mg/L	Chlorophyll-a ug/L
C-15	31E	1.55	0.242	21.33
	31C	1.24	0.125	15.78
	31B	1.02	0.106	13.73
C-16	22	1.03	0.053	12.12
	24	0.99	0.060	12.49
	27B	1.49	0.164	13.68
	27A	1.14	0.116	14.07
	28	1.02	0.073	8.02
C-17	12A	1.40	0.052	12.73
	C17S44	0.87	0.041	9.16
C-18	16	0.99	0.033	4.02
	15	0.90	0.020	2.27
	92	0.82	0.02	3.56
	81	0.77	0.021	4.62
C-51	38B	1.64	0.104	6.33
	37B	1.22	0.074	4.24
	C51S155	1.14	0.065	1.67
Loxahatchee River	69	1.00	0.038	2.90
	62	0.79	0.046	5.37
	51	0.35	0.025	4.01
	72	0.61	0.037	8.33
	30	0.29	0.026	3.99
Lake Worth Lagoon North	LWL-1	0.35	0.032	5.08
	11	0.43	0.035	3.26
	13	0.50	0.040	4.01
	LWL-4	0.28	0.023	2.63
Lake Worth Lagoon Central Watershed	LWL-8	0.53	0.049	5.43
	18C	0.80	0.065	5.57
	18D	0.59	0.061	5.53
	LWL-11	0.48	0.046	5.59
Lagoon South	LWL-13	0.39	0.034	5.09
	LWL-18	0.52	0.052	8.32
Hillsboro	1	0.80	0.097	5.47
	2	1.26	0.084	6.59
	3	1.42	0.098	7.11
	S39	0.13	0.018	None
L-8	Culv10a	2.12	0.142	2.0
S-2-6-7	S-2	1.77	0.089	2.65
	39	1.62	0.126	5.88
	43	1.57	0.113	6.93

- C-15, a Class III Freshwater has a minimum level of chlorophyll-a (corrected) AGM of 20 µg/L
- Northern Lake Worth Lagoon has a minimum level of chlorophyll-a (corrected) AGM of 2.9 µg/L
- Northern Lake Worth Lagoon has a minimum level of Total Nitrogen AGM of .54 mg/L
- Northern Lake Worth Lagoon has a minimum level of Total Phosphorus AGM of .044 mg/L
- Central Lake Worth Lagoon has a minimum level of Total Nitrogen AGM of .66 mg/L
- Central Lake Worth Lagoon has a minimum level of Total Phosphorus AGM of .049 mg/L

Table 5-8
Total Nitrogen (Annual Geometric Mean)
(Page 1 of 4)

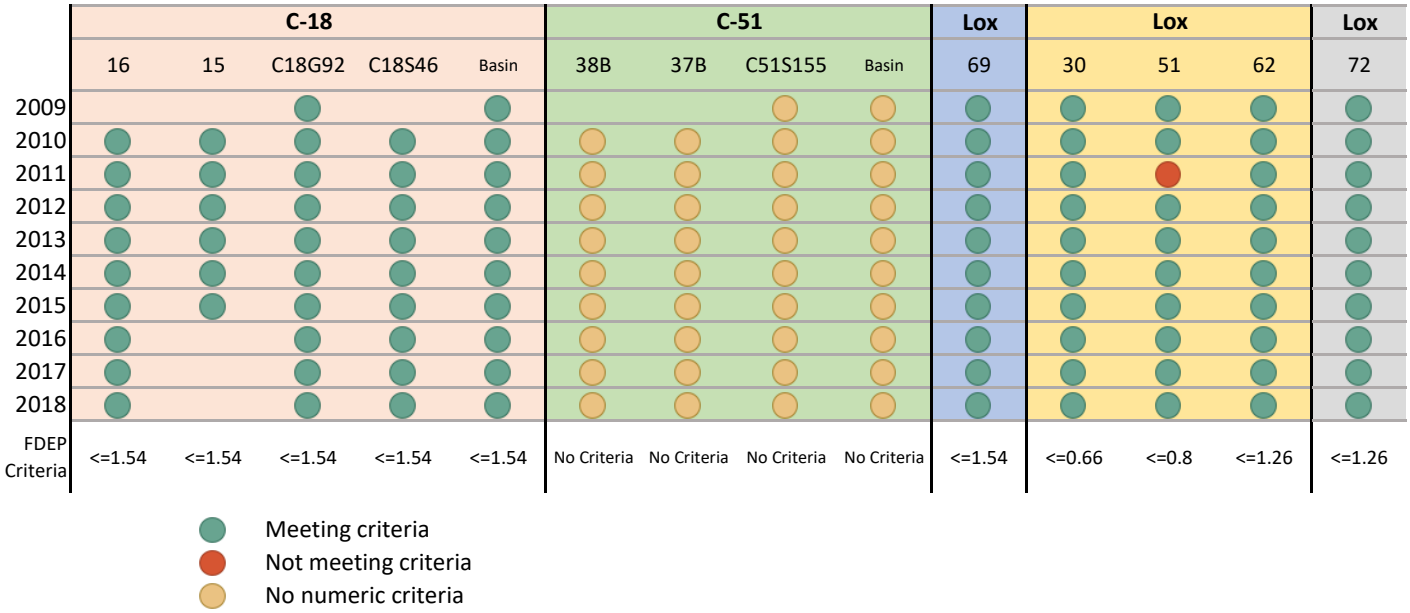


Values Used (mg/l)

2009			0.92	0.92					1.04	1.04		0.94	0.94
2010	2.13	1.58	0.88	1.44	1.29	1.29	1.96	1.53	0.89	1.35	1.67	0.93	1.25
2011	1.56	1.01	1.09	1.20	1.10	1.32	1.44	1.09	0.88	1.15	1.31	0.91	1.09
2012	1.30	1.08	0.97	1.11	1.01	1.00	1.44	1.16	1.01	1.11	1.16	0.91	1.02
2013	1.20	1.00	0.97	1.05	0.80	0.76	1.18	0.92	1.01	0.92	0.92	0.89	0.91
2014	1.30	0.84	0.76	0.94	0.82	0.72	1.14	0.86	0.74	0.85	0.93	0.39	0.60
2015	1.21	0.76	0.88	0.93	0.91	0.83	1.31	0.80	1.46	1.03	1.07	0.77	0.91
2016	1.61	1.09	1.02	1.21	0.96	0.85	1.33	1.22	0.82	1.02	0.98	0.88	0.93
2017	1.19	1.09	1.07	1.12	0.84	1.05	1.43	1.22	0.57	0.97	1.03	0.69	0.84
2018	1.19	1.00	0.92	1.03	1.13	0.90	1.29	0.39	0.80	0.84	0.39	0.86	0.58

Varies TN ≤ 1.27 AGM when Chlorophyll-a >20 mg/l
TN ≤ 2.23 AGM when Chlorophyll-a ≤20 mg/l

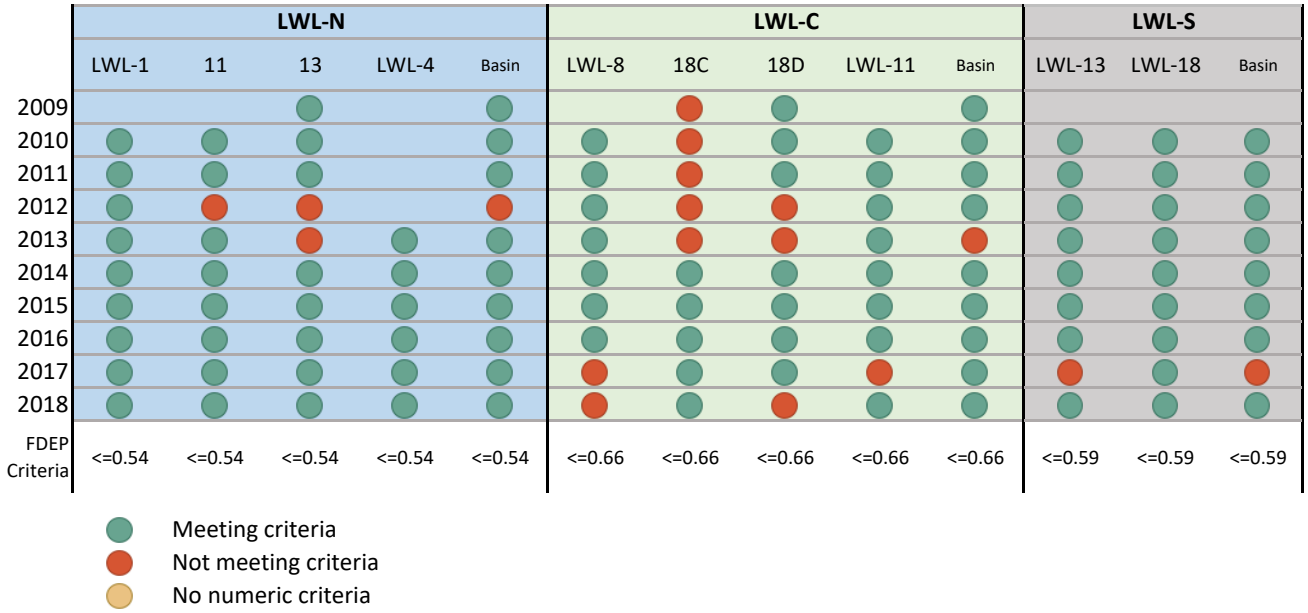
Table 5-8
Total Nitrogen (Annual Geometric Mean)
(Page 2 of 4)



Values Used (mg/l)

2009			0.99		0.99			1.18	1.18	1.05	0.02	0.23	0.48	0.40
2010	1.32	1.30	0.87	0.86	1.06	1.83	1.60	1.25	1.54	0.94	0.21	0.15	0.72	0.50
2011	1.27	1.27	0.93	0.86	1.07	2.13	1.26	0.88	1.33	0.67	0.34	0.87	0.76	0.38
2012	1.08	0.93	0.95	0.90	0.96	1.40	0.76	0.95	1.00	1.30	0.21	0.22	0.57	0.51
2013	0.87	0.64	0.88	0.82	0.79	1.15	1.26	1.96	1.42	0.81	0.15	0.15	0.62	0.41
2014	0.66	0.66	0.23	0.25	0.39	1.39	1.16	0.73	1.06	0.91	0.24	0.35	0.79	0.57
2015	0.77	0.76	0.80	0.74	0.77	1.19	1.09	0.97	1.08	0.85	0.20	0.20	0.58	0.52
2016	0.94		0.97	0.91	0.94	1.37	1.02	1.14	1.17	0.91	0.25	0.25	0.72	0.70
2017	0.88		0.87	0.97	0.91	1.14	0.80	0.79	0.90	1.01	0.25	0.22	0.57	0.69
2018	1.08	0.27	1.13	0.83	0.72	2.22	1.65	1.34	1.70	0.95	0.37	0.52	0.71	0.79

Table 5-8
Total Nitrogen (Annual Geometric Mean)
(Page 3 of 4)



Values Used (mg/l)

2009			0.49		0.49		0.79	0.53		0.64			
2010	0.32	0.45	0.52		0.42	0.48	0.99	0.65	0.45	0.61	0.37	0.40	0.3841
2011	0.22	0.45	0.50		0.36	0.14	0.83	0.52	0.26	0.35	0.22	0.24	0.2303
2012	0.33	0.72	0.81		0.58	0.42	0.94	0.84	0.42	0.61	0.35	0.42	0.3854
2013	0.28	0.53	0.59	0.23	0.38	0.54	0.93	0.90	0.48	0.68	0.41	0.44	0.4217
2014	0.19	0.25	0.33	0.14	0.22	0.32	0.65	0.52	0.16	0.37	0.14	0.15	0.1442
2015	0.32	0.22	0.25	0.21	0.25	0.39	0.62	0.30	0.39	0.41	0.30	0.46	0.3718
2016	0.33	0.23	0.37	0.31	0.31	0.55	0.45	0.30	0.53	0.45	0.32	0.46	0.3882
2017	0.34	0.13	0.14	0.25	0.20	0.67	0.21	0.15	0.66	0.35	0.99	0.56	0.7437
2018	0.41	0.20	0.40	0.31	0.32	0.74		0.70	0.47	0.62	0.44	0.27	0.34

Table 5-8
Total Nitrogen (Annual Geometric Mean)
(Page 4 of 4)

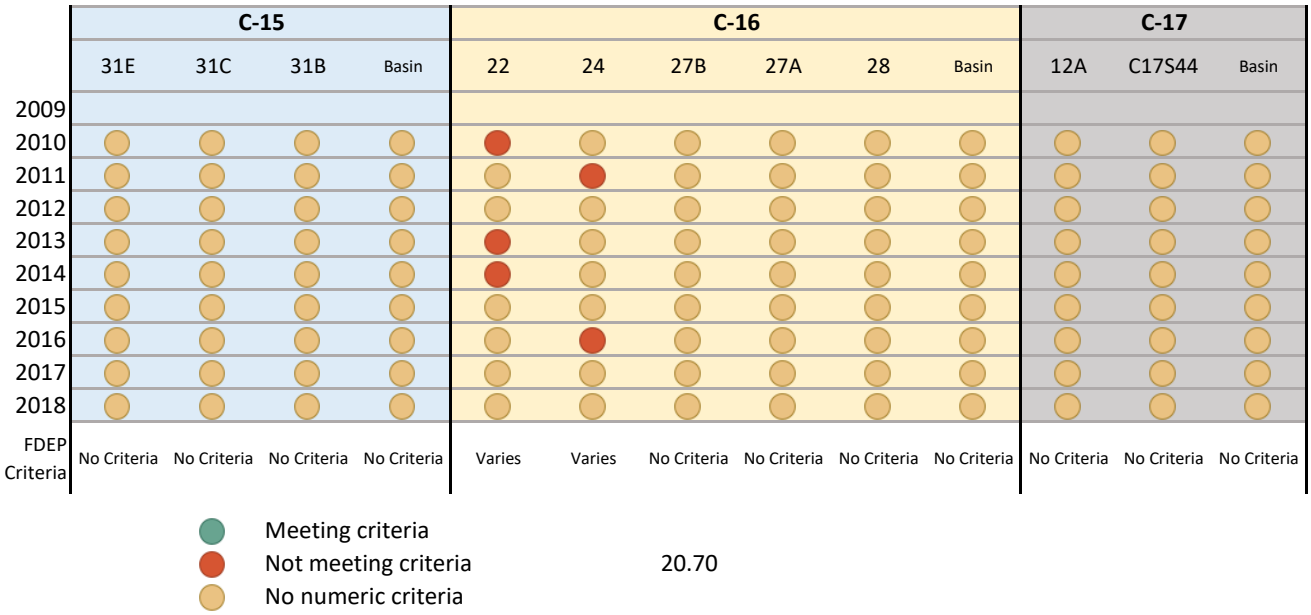
	Hillsboro					L-8	S-2-6-7			
	1	2	3	S39	Basin	Culv10A	S-2	39	43	Basin
2009	●	●	●		●	●				
2010	●	●	●		●					
2011	●	●	●		●					
2012	●	●	●		●					
2013	●	●	●		●					
2014										
2015										
2016	●	●	●		●					
2017	●	●	●		●			●	●	●
2018	●	●	●	●	●	●	●	●	●	●
FDEP Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria

● No numeric criteria

Values Used (mg/l)

2009	0.79	1.23	1.42		1.11	0.5				
2010	0.65	1.14	1.46		1.03					
2011	0.54	1.11	1.37		0.94					
2012	0.75	1.36	1.42		1.13					
2013	0.67	1.30	1.38		1.06					
2014										
2015										
2016	1.19	1.25	1.42		1.28					
2017	0.59	1.38	1.38		1.04			4.23	5.22	4.70
2018	1.41	1.47	1.52	0.03	0.56	2.23	1.77	1.62	1.57	1.65

Table 5-9
Total Phosphorus (Annual Geometric Mean)
(Page 1 of 4)



Values Used (mg/l)

2009													
2010	0.39	0.12	0.11	0.17	0.06	0.07	0.19	0.14	0.06	0.09	0.01	0.05	0.02
2011	0.19	0.08	0.09	0.11	0.03	0.09	0.13	0.08	0.04	0.07	0.06	0.05	0.05
2012	0.24	0.12	0.09	0.14	0.05	0.05	0.14	0.12	0.06	0.08	0.06	0.05	0.05
2013	0.25	0.15	0.09	0.15	0.06	0.07	0.07	0.10	0.06	0.07	0.06	0.05	0.05
2014	0.28	0.12	0.10	0.15	0.12	0.06	0.18	0.11	0.07	0.10	0.05	0.04	0.05
2015	0.16	0.07	0.05	0.08	0.05	0.07	0.16	0.05	0.05	0.07	0.04	0.04	0.04
2016	0.30	0.16	0.13	0.19	0.06	0.05	0.33	0.14	0.14	0.11	0.06	0.04	0.05
2017	0.18	0.12	0.02	0.08	0.01	0.02	0.11	0.07	0.03	0.03	0.05	0.03	0.04
2018	0.16	0.12		0.13	0.07	0.06	0.14	0.03	0.08	0.07	0.06	0.05	0.06

Varies TP ≤ 0.050 AGM when Chlorophyll-a >20 mg/l
TP ≤ 0.16 AGM when Chlorophyll-a ≤20 mg/l

Table 5-9
Total Phosphorus (Annual Geometric Mean)
(Page 2 of 4)

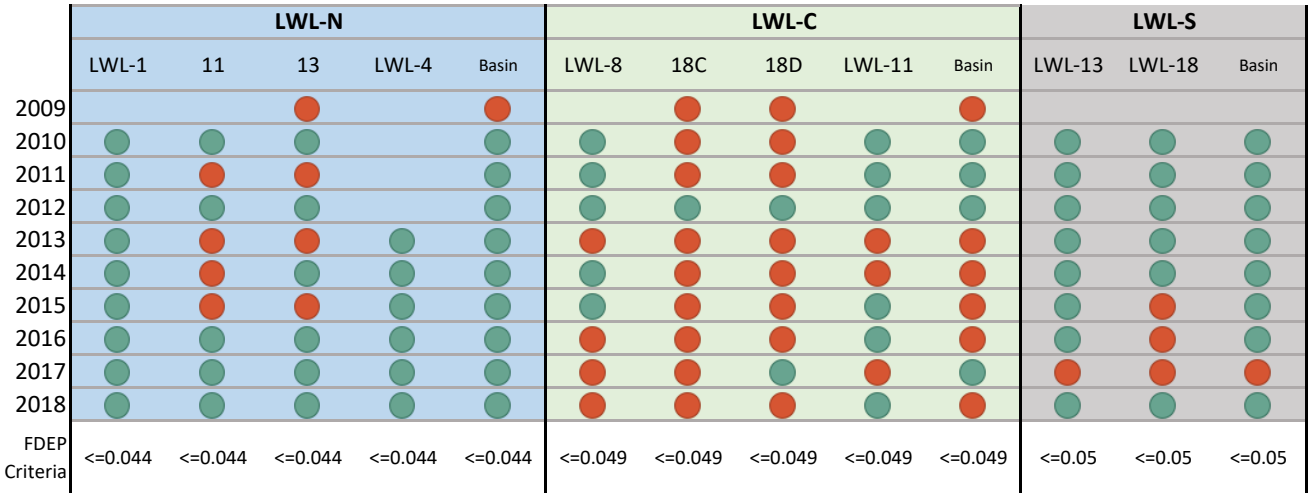
	C-18					C-51				Lox	Lox			Lox
	16	15	C18G92	C18S46	Basin	38B	37B	C51S155	Basin	69	30	51	62	72
2009										●	●	●	●	●
2010	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2011	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2012	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2013	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2014	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2015	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2016	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2017	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2018	●	●	●	●	●	●	●	●	●	●	●	●	●	●
FDEP Criteria	<=0.12	<=0.12	<=0.12	<=0.12	<=0.12	No Criteria	No Criteria	No Criteria	No Criteria	<=0.12	<=0.035	<=0.03	<=0.075	<=0.075

● Meeting criteria
● Not meeting criteria
● No numeric criteria

Values Used (mg/l)

2009										0.04	0.02	0.02	0.05	0.03
2010	0.05	0.04	0.02	0.02	0.03	0.11	0.11	0.07	0.09	0.04	0.03	0.02	0.05	0.04
2011	0.03	0.02	0.02	0.02	0.02	0.07	0.06	0.04	0.05	0.06	0.05	0.06	0.02	0.03
2012	0.03	0.01	0.02	0.02	0.02	0.13	0.04	0.03	0.06	0.04	0.03	0.03	0.04	0.04
2013	0.03	0.00	0.02	0.02	0.02	0.09	0.08	0.06	0.08	0.03	0.02	0.03	0.06	0.04
2014	0.01	0.01	0.04	0.02	0.02	0.11	0.14	0.06	0.10	0.04	0.02	0.03	0.06	0.04
2015	0.02	0.01	0.02	0.02	0.02	0.11	0.08	0.08	0.09	0.03	0.02	0.02	0.05	0.04
2016	0.02	0.01	0.03	0.03	0.02	0.08	0.09	0.06	0.08	0.03	0.02	0.02	0.05	0.05
2017	0.03	0.15	0.04	0.02	0.04	0.18	0.05	0.06	0.08	0.04	0.02	0.02	0.04	0.03
2018	0.02	0.01	0.06	0.03	0.02	0.16	0.11	0.09	0.11	0.06	0.03	0.03		0.04

Table 5-9
Total Phosphorus (Annual Geometric Mean)
(Page 3 of 4)



Meeting criteria
Not meeting criteria
No numeric criteria

Values Used (mg/l)

2009			0.19		0.19		0.17	0.20		0.18			
2010	0.03	0.03	0.03		0.03	0.04	0.06	0.06	0.04	0.05	0.03	0.04	0.0346
2011	0.02	0.05	0.06		0.04	0.01	0.07	0.07	0.03	0.04	0.03	0.03	0.0269
2012	0.04	0.03	0.04		0.04	0.04	0.01	0.04	0.04	0.03	0.03	0.04	0.037
2013	0.03	0.07	0.06	0.02	0.04	0.05	0.08	0.08	0.06	0.07	0.04	0.05	0.0436
2014	0.03	0.06	0.04	0.02	0.03	0.05	0.07	0.06	0.05	0.06	0.03	0.04	0.0368
2015	0.03	0.06	0.06	0.02	0.04	0.04	0.08	0.07	0.04	0.05	0.02	0.05	0.034
2016	0.03	0.04	0.04	0.02	0.03	0.05	0.08	0.06	0.04	0.06	0.03	0.05	0.0369
2017	0.03	0.01	0.01	0.02	0.01	0.06	0.05	0.02	0.06	0.04	0.07	0.07	0.0725
2018	0.04	0.03	0.04	0.02	0.03	0.07	0.07	0.06	0.03	0.06	0.03	0.03	0.03

Table 5-9
Total Phosphorus (Annual Geometric Mean)
(Page 4 of 4)

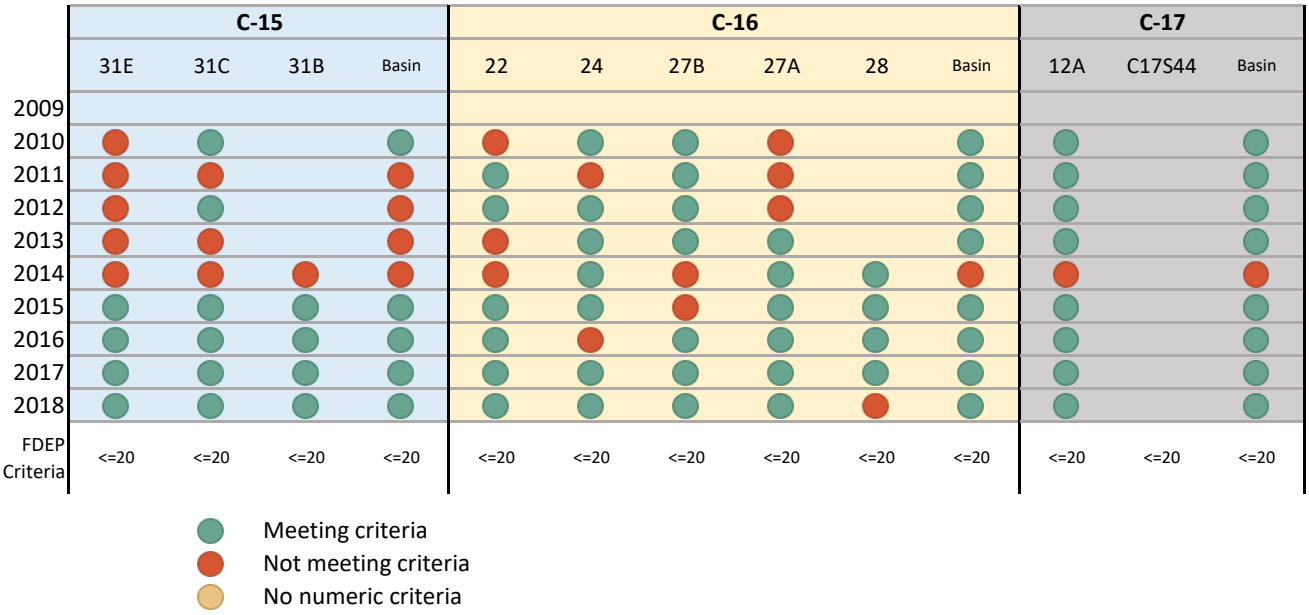
	Hillsboro					L-8	S-2-6-7			
	1	2	3	S39	Basin	Culv10a	S-2	39	43	Basin
2009	●	●	●	●	●	●				
2010	●	●	●	●	●	●				
2011	●	●	●	●	●	●				
2012	●	●	●	●	●	●				
2013	●	●	●	●	●	●				
2014	●	●	●	●	●	●				
2015				●	●	●				
2016	●	●	●	●	●	●				
2017	●	●	●	●	●	●	●	●	●	
2018	●	●	●	●	●	●	●	●	●	
FDEP Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria

● No numeric criteria

Values Used (mg/l)

2009	0.11	0.12	0.15	0.02	0.08	0.16				
2010	0.10	0.08	0.09	0.01	0.06	0.15				
2011	0.08	0.06	0.07	0.01	0.04	0.12				
2012	0.10	0.09	0.14	0.02	0.07	0.10				
2013	0.08	0.08	0.07	0.02	0.05	0.14				
2014	0.11	0.10	0.07	0.01	0.06	0.16				
2015				0.01	0.01	0.15				
2016	0.18	0.10	0.13	0.01	0.08	0.15				
2017	0.11	0.05	0.06	0.01	0.04	0.19	0.11	0.12	0.09	0.11
2018	0.07	0.06	0.06	0.02	0.04	0.17	0.13	0.13	0.13	0.13

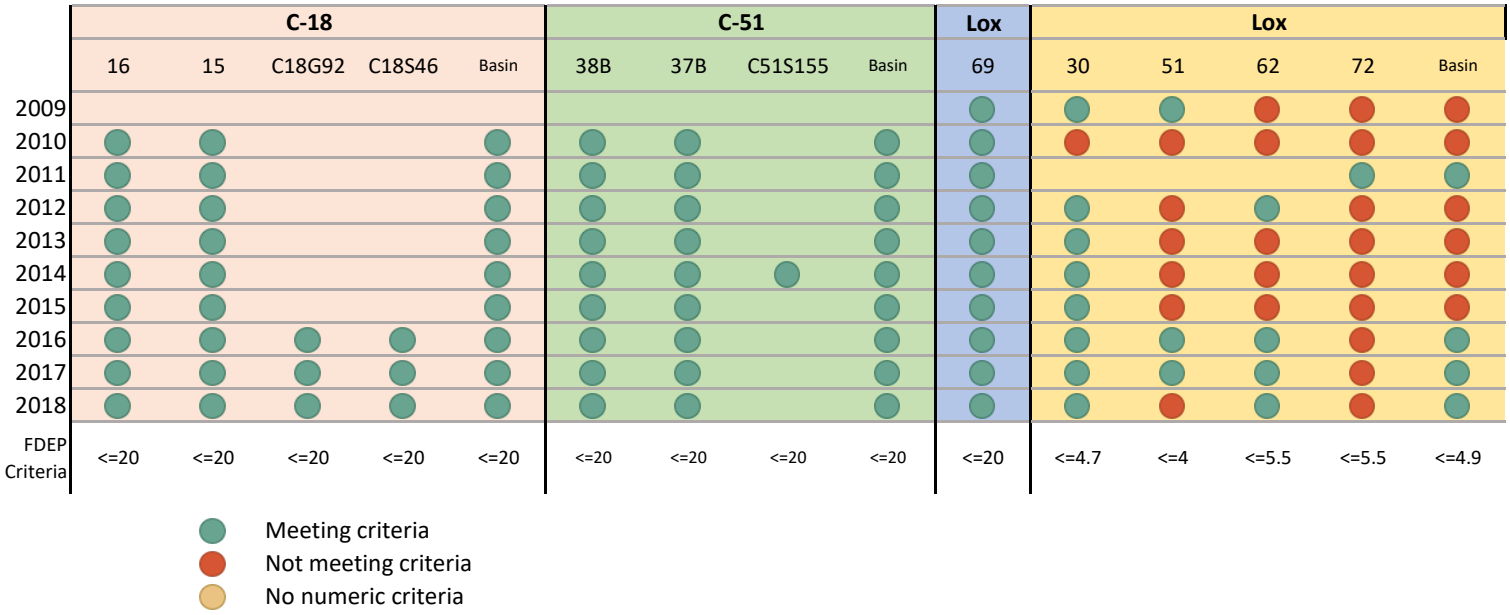
Table 5-10
Chlorophyll-A (Annual Geometric Mean)
(Page 1 of 4)



Values Used (ug/l)

2009													
2010	33.53	7.63		15.99	21.80	13.51	19.74	24.55		19.43	17.26		17.26
2011	28.22	23.48		25.74	17.83	20.25	15.35	20.92		18.45	12.41		12.41
2012	24.95	16.18		20.09	17.67	18.51	18.54	20.44		18.76	17.74		17.74
2013	43.87	24.19		32.57	28.64	15.83	7.38	17.32		15.51	12.50		12.50
2014	39.23	28.66	27.53	31.39	22.70	17.75	35.79	18.36	15.53	21.03	20.44		20.44
2015	16.28	9.10	18.72	14.05	9.86	13.62	26.83	8.03	8.27	11.91	12.94		12.94
2016	9.72	8.42	17.18	11.20	12.73	20.70	7.45	8.11	5.56	9.76	11.78		11.78
2017	16.15	15.39	19.16	16.82	18.04	6.14	9.60	8.04	4.57	8.29	8.10		8.10
2018	14.58	9.63	16.84	13.32	9.52	4.58	3.39	10.83	20.68	8.02	5.98		5.98

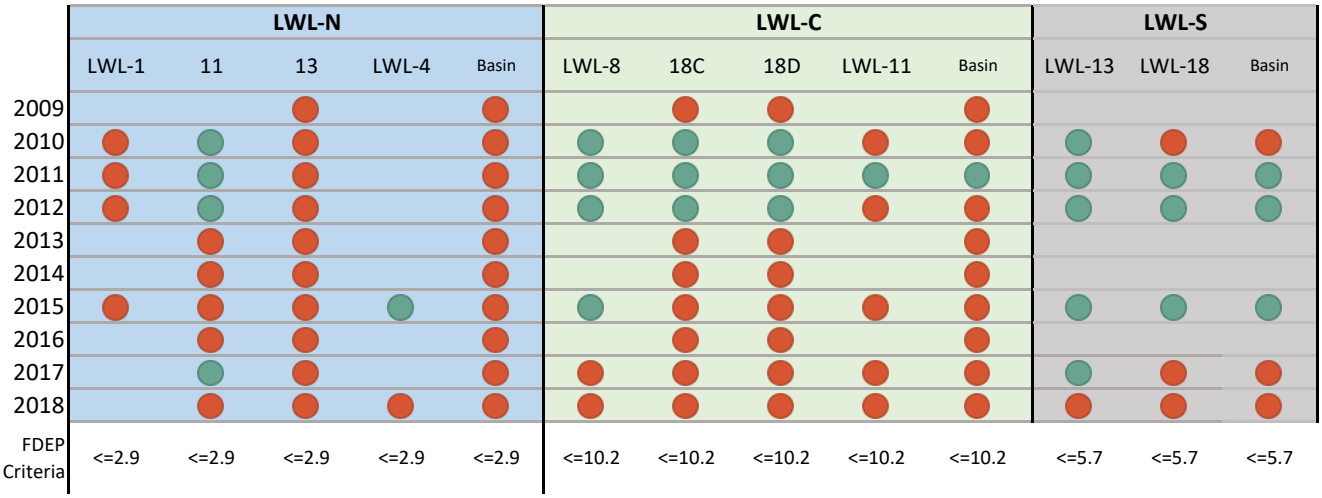
Table 5-10
Chlorophyll-A (Annual Geometric Mean)
(Page 2 of 4)



Values Used (ug/l)

2009										4.98	3.98	2.78	7.04	10.14	5.30
2010	5.62	2.99			4.10	7.97	8.25		8.11	5.67	6.00	4.19	6.58	11.53	6.61
2011	6.44	1.52			3.13	19.35	4.84		9.68	2.94				3.48	3.48
2012	6.17	1.52			3.06	8.64	4.21		6.03	2.01	3.39	4.17	4.64	9.86	5.04
2013	5.65	2.09			3.44	5.16	4.36		4.75	2.36	3.50	4.28	6.10	8.66	5.30
2014	2.14	2.14			2.14	4.07	2.79	0.03	0.66	3.00	4.14	4.49	5.50	11.23	5.82
2015	2.54	1.26			1.79	5.64	2.06		3.41	1.92	4.02	4.07	5.94	10.83	5.70
2016	5.63	2.34	6.51	8.05	5.13	10.17	3.93		6.32	2.47	3.53	2.95	4.76	7.07	4.33
2017	4.80	2.02	3.44	6.71	3.87	3.16	3.98		3.55	2.09	3.59	2.29	5.33	7.71	4.29
2018	2.57	2.58	3.09	5.52	3.26	4.22	4.99		4.59	3.30	3.26	5.96	4.83	4.90	4.63

Table 5-10
Chlorophyll-A (Annual Geometric Mean)
(Page 3 of 4)

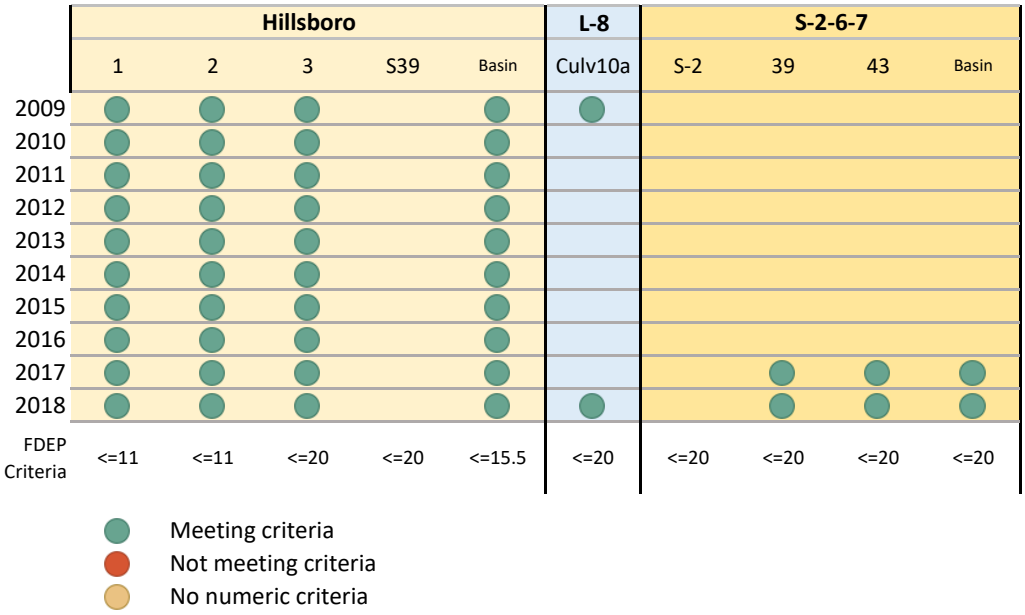


Meeting criteria
Not meeting criteria
No numeric criteria

Values Used (ug/l)

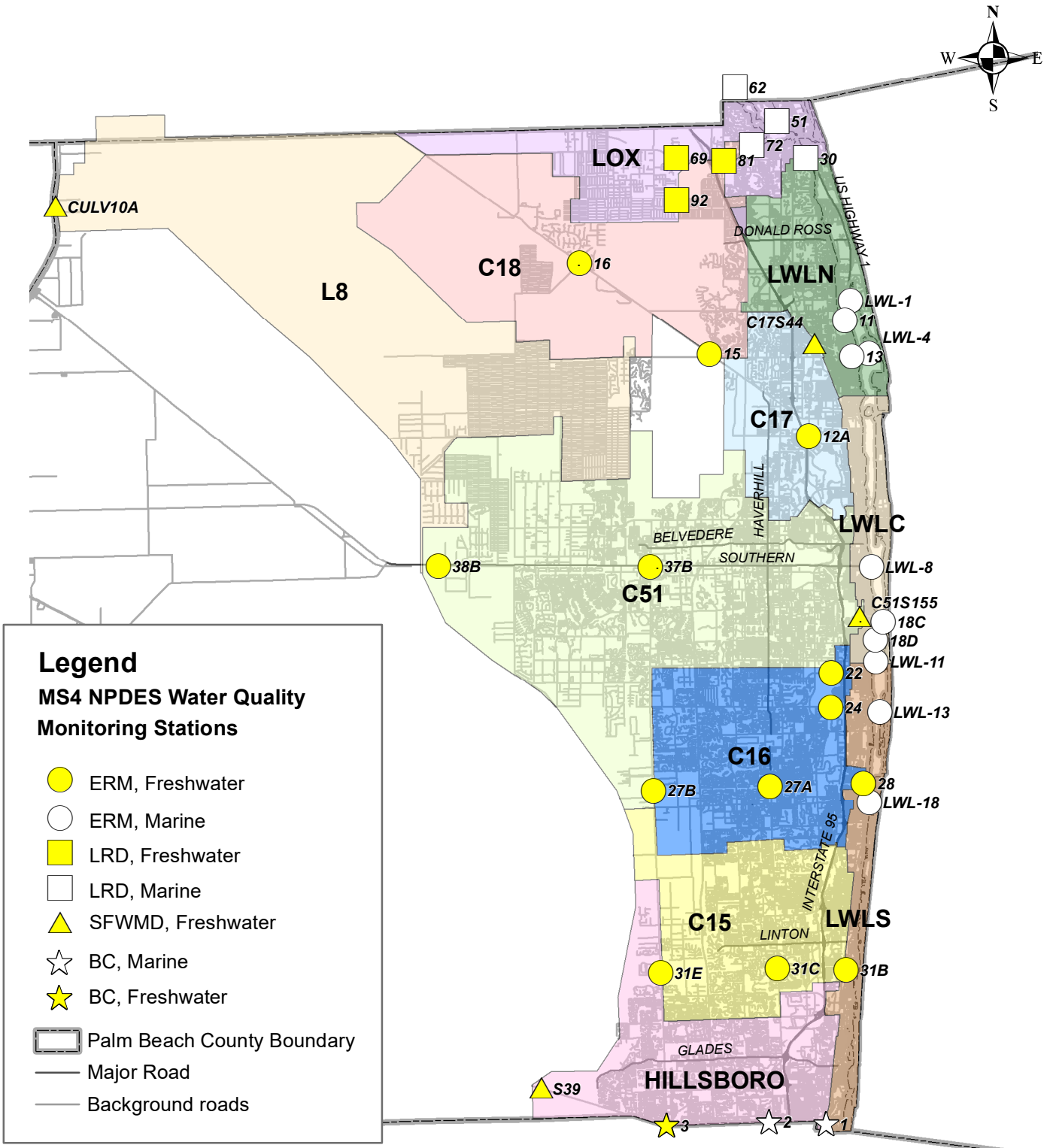
2009			4.48		4.48		3/11	3/11		6/22			
2010	4.51	2.16	4.08		3.41	1/12	1/12	1/12	3/12	7/60	4.8	6.7	5.8
2011	3.48	2.89	4.05		3.44	0/2	1/11	1/11	0/2	2/28	3	3	3
2012	4.73	2.85	4.12		3.81	1/11	1/12	1/12	1/10	5/47	4.3	5.5	4.9
2013		3.90	4.55		4.22		4/12	5/12		9/12			
2014		5.23	7.51		6.26		6/9	8/9		14/18			
2015	5.10	3.28	3.41	1.81	3.19	1/10	2/7	1/7	2/10	6/44	4.08	5.11	4.6
2016		7.06	3.82		5.19		1/5	1/5		2/5			
2017		2.81	3.92		3.32	1/7	1/6	1/6	2/7	5/26	5.4	7.9	6.7
2018	6.92	3.12	4.26	5.79	4.81	9/10	5/6	5/6	9/10	28/32	11.11	5.73	7.98

Table 5-10
Chlorophyll-A (Annual Geometric Mean)
(Page 4 of 4)



2009	8.27	10.65	5.80		7.99	0.5				
2010	4.00	5.80	13.00		6.71					
2011	4.14	4.54	8.76		5.48					
2012	3.71	10.50	8.86		7.01					
2013	7.00	5.27	4.58		5.52					
2014	6.85	4.62	7.26		6.13					
2015	4.33	4.61	3.61		4.16					
2016	3.55	2.76	3.10		3.12					
2017	3.13	2.22	0.85		1.81			4.23	5.22	4.70
2018	6.14	4.34	5.17		5.16	2.23		7.17	8.20	7.67

g:/npbc/npbcnpds/monitoring/B6050.90/WQ_Stations2.mxd



Legend

MS4 NPDES Water Quality Monitoring Stations

- ERM, Freshwater
- ERM, Marine
- LRD, Freshwater
- LRD, Marine
- SFWMD, Freshwater
- BC, Marine
- BC, Freshwater
- Palm Beach County Boundary
- Major Road
- Background roads

LRD = Loxahatchee River District
PBC = Palm Beach County Environmental Resources Management
SFWMD = South Florida Water Management District
BC = Broward County
LWL = Lake Worth Lagoon

P.A. No.: B6050.90

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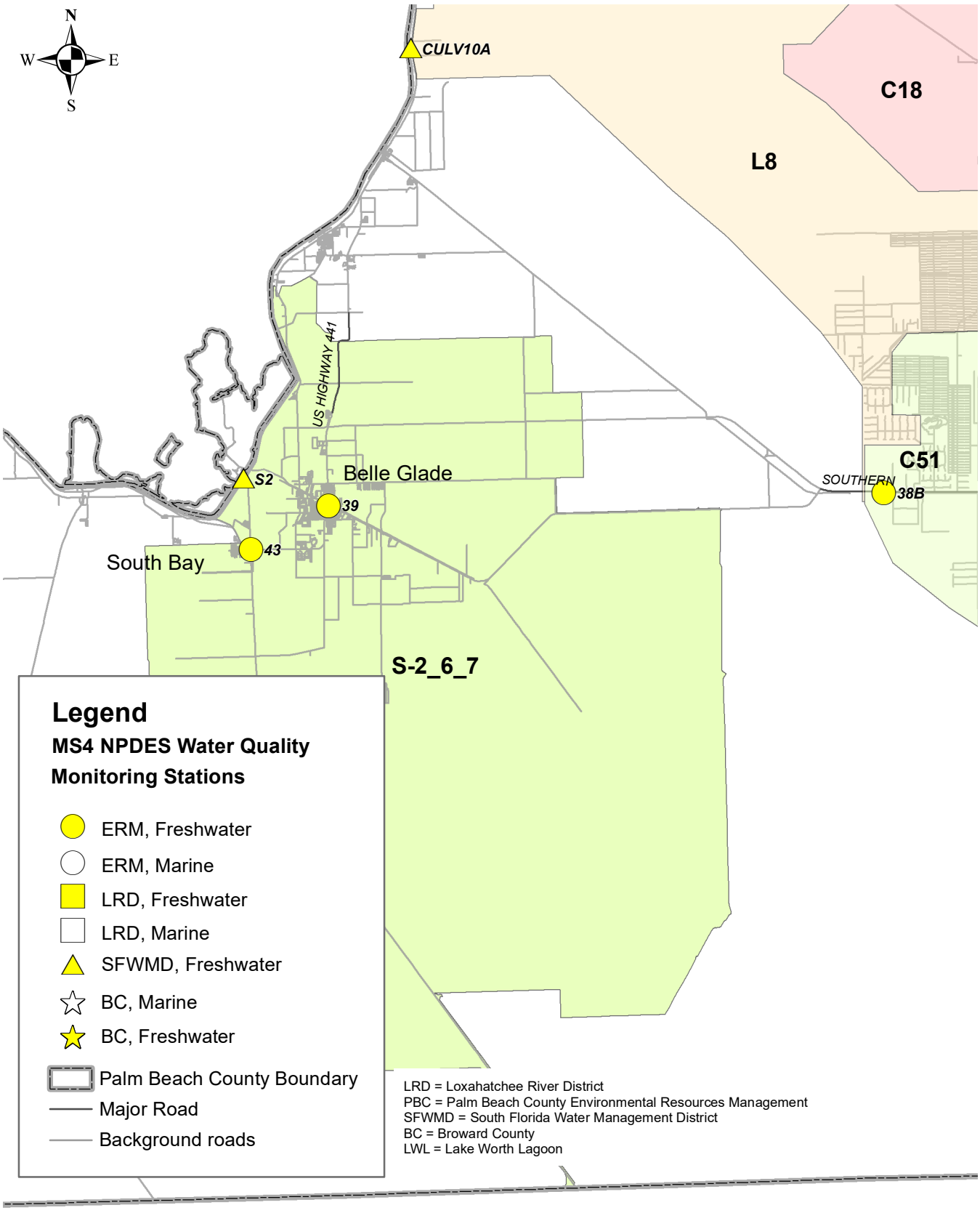
Palm Beach County (Eastern Area) Watershed Boundaries and Water Quality Monitoring Stations

Figure 5-1

g:/npbc/npbcnpds/monitoring/B6050.90/WQ_Stations2.mxd



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Palm Beach County (Western Area) Watershed Boundaries and Water Quality Monitoring Stations

Figure 5-1

Figure 5-2
Total Nitrogen
C-15 Watershed

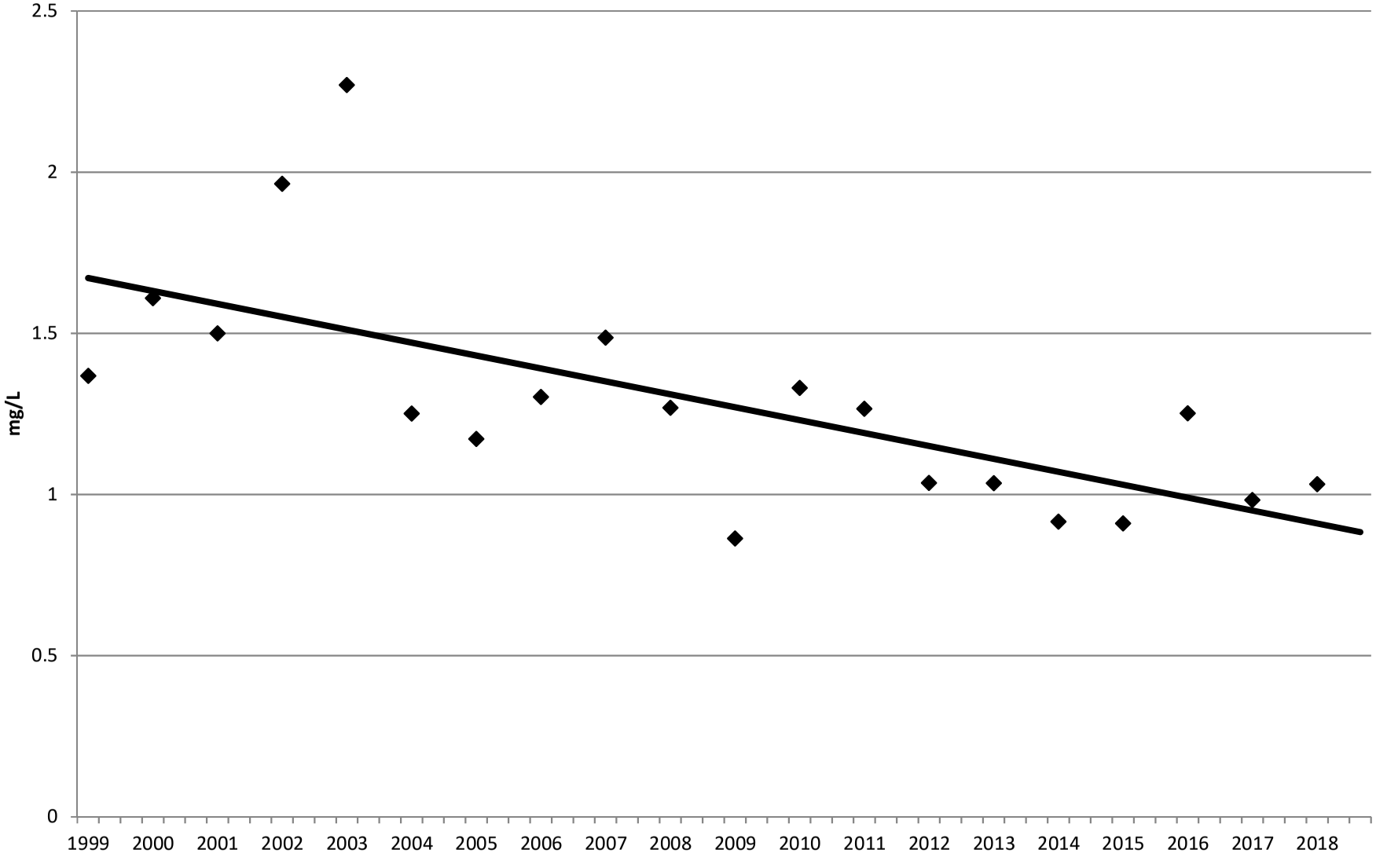

Figure 5-2
Total Nitrogen
C-16 Watershed

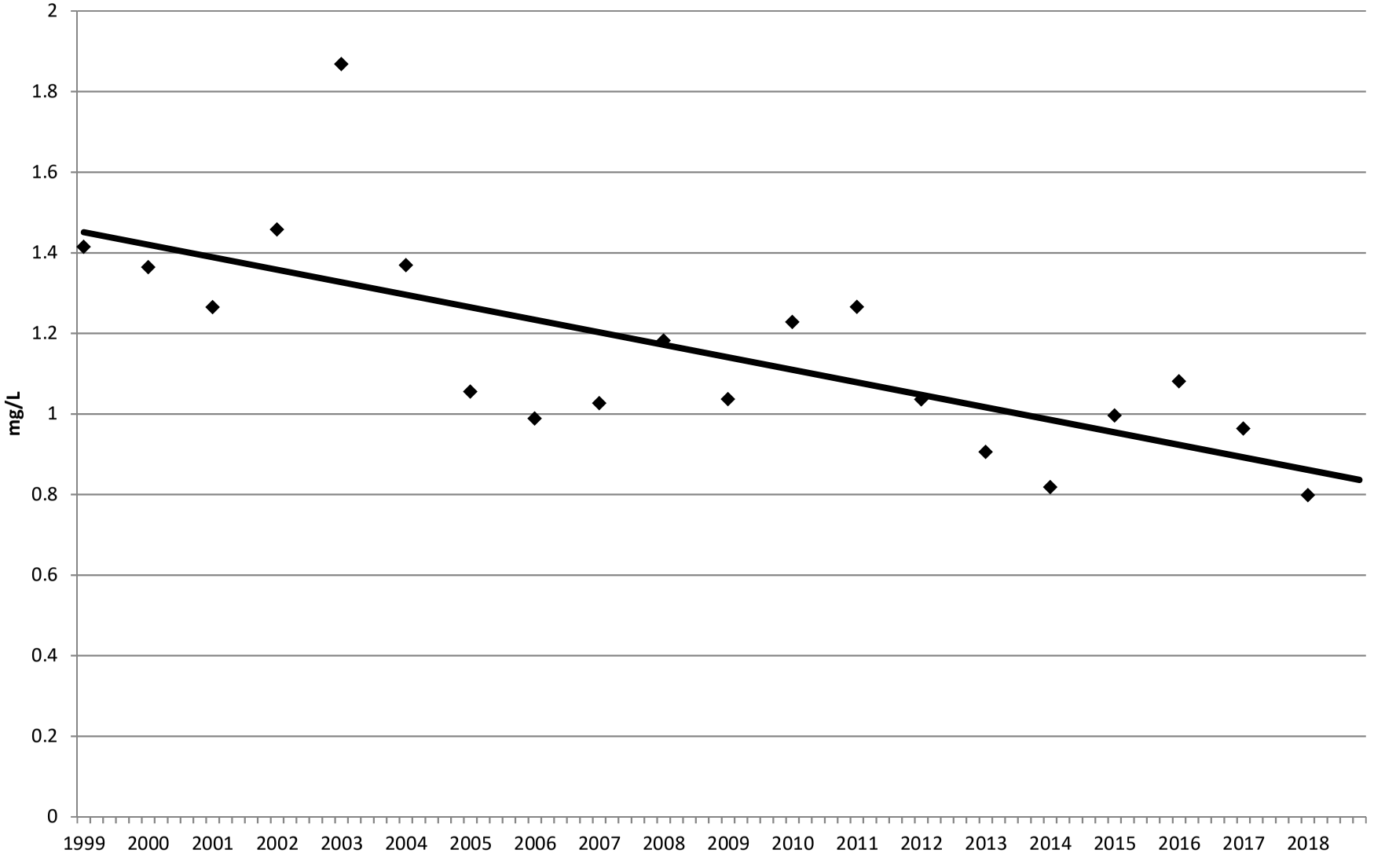

Figure 5-2
Total Nitrogen
C-17 Watershed

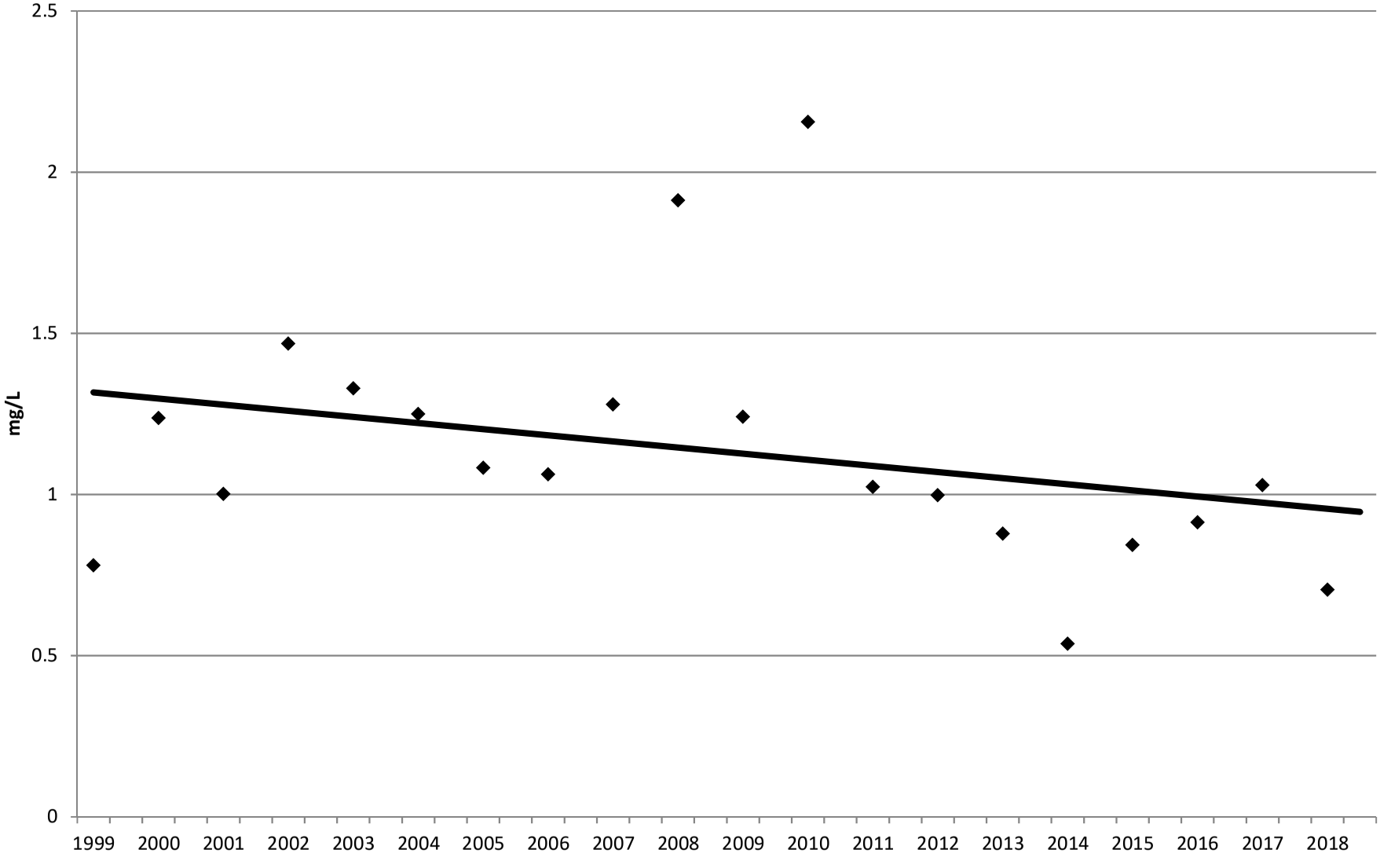

Figure 5-2
Total Nitrogen
C-18 Watershed

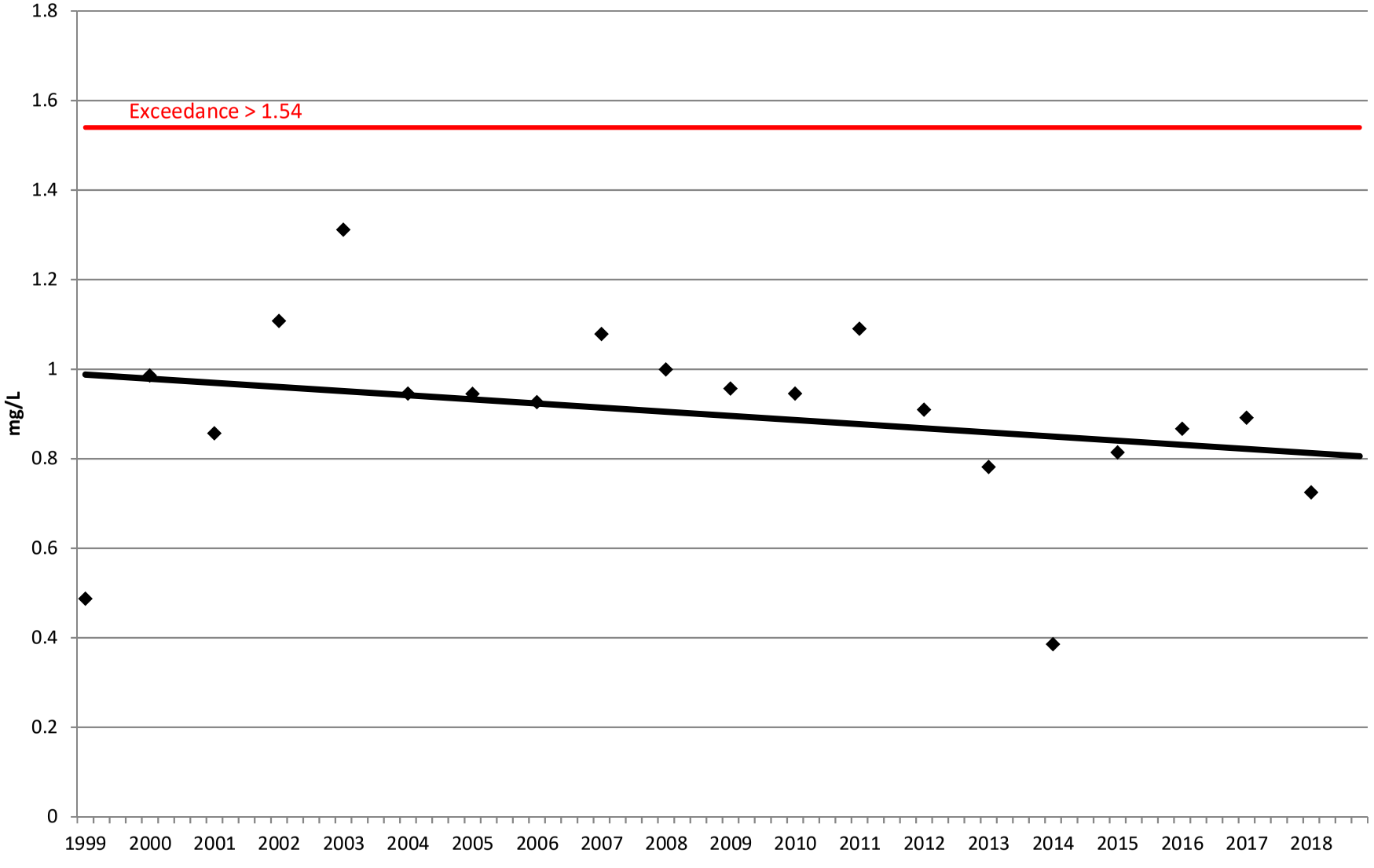

Figure 5-2
Total Nitrogen
C-51 Watershed

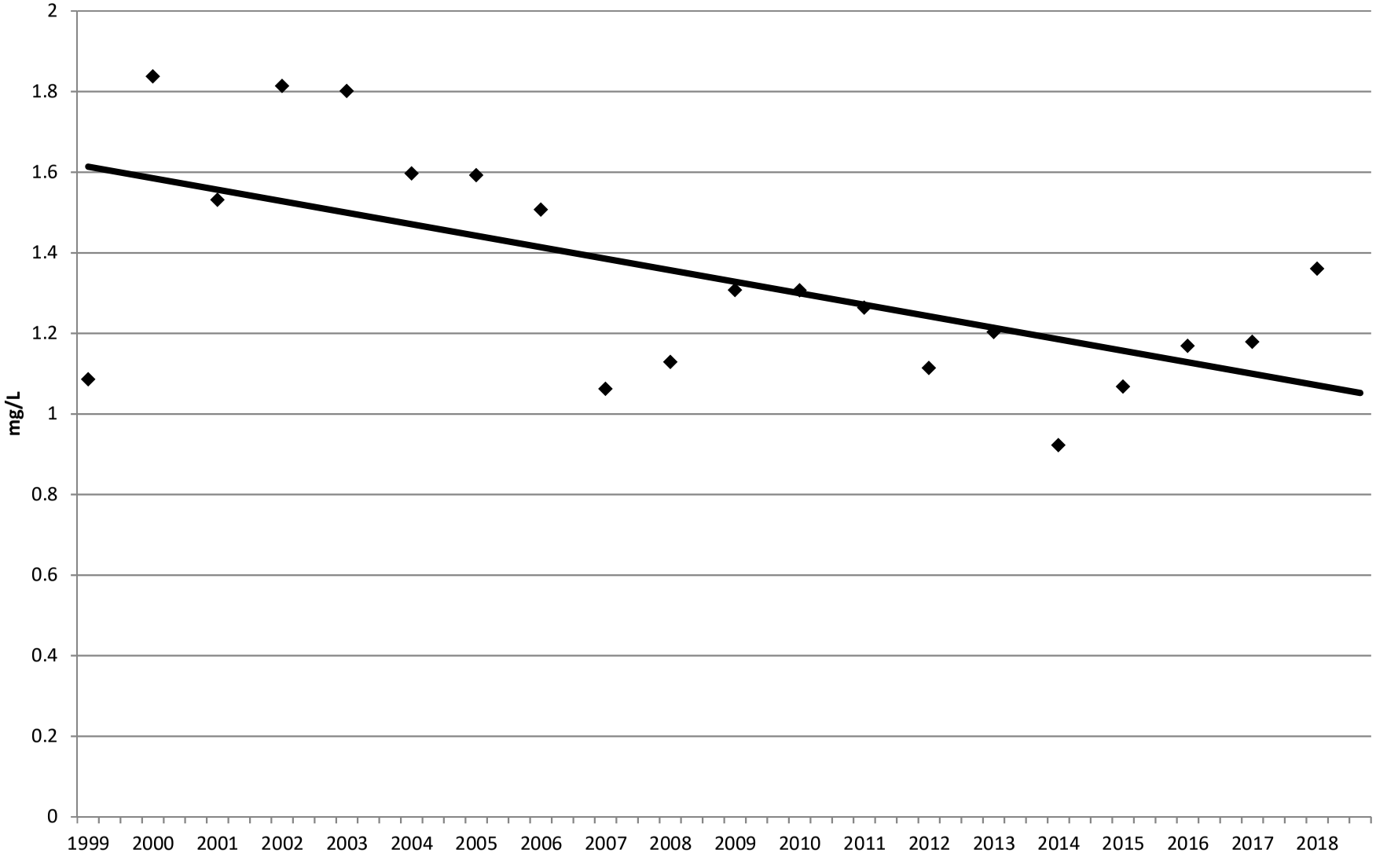

Figure 5-2
Total Nitrogen
Loxahatchee

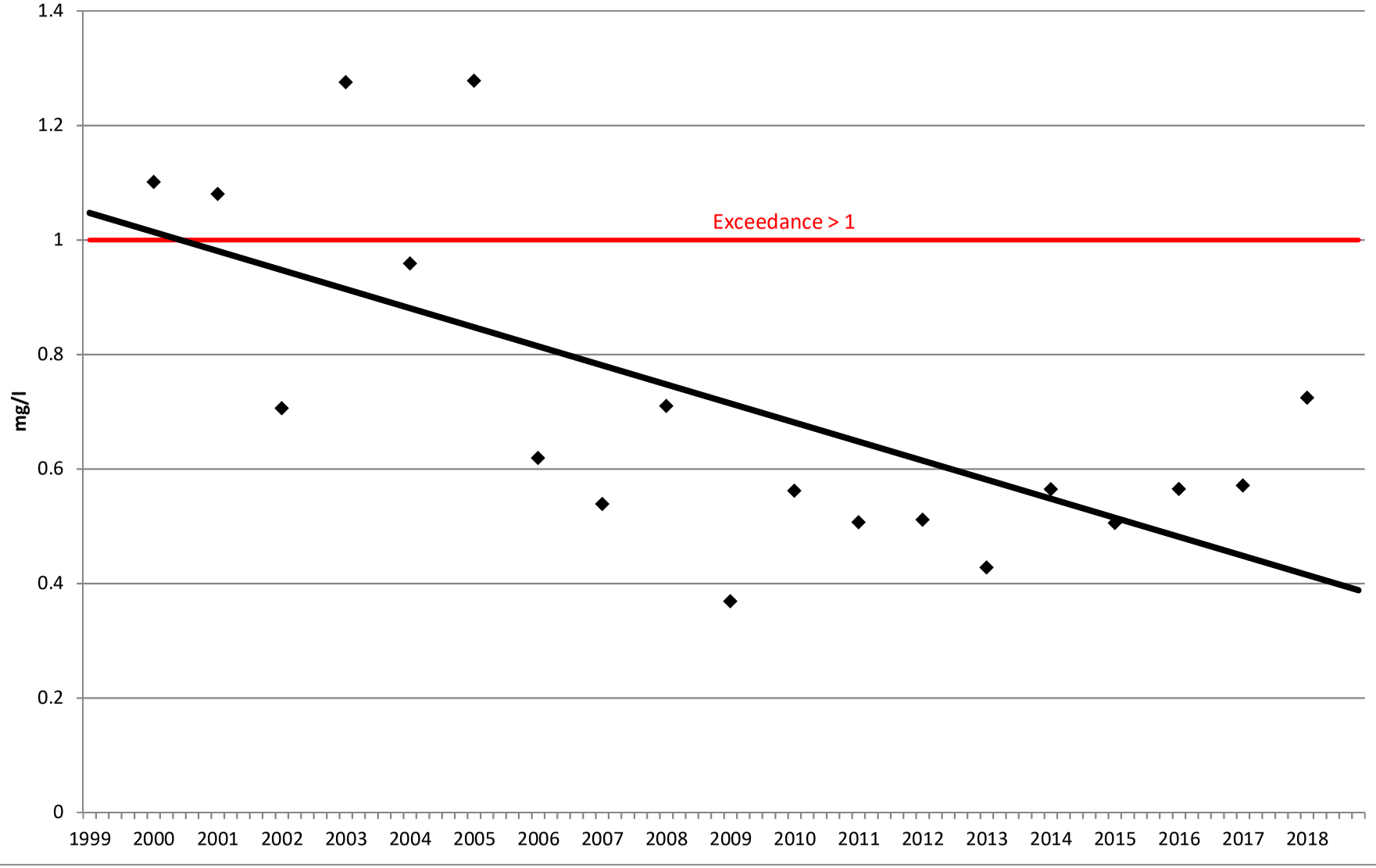

Figure 5-2
Total Nitrogen
Lake Worth Lagoon-N

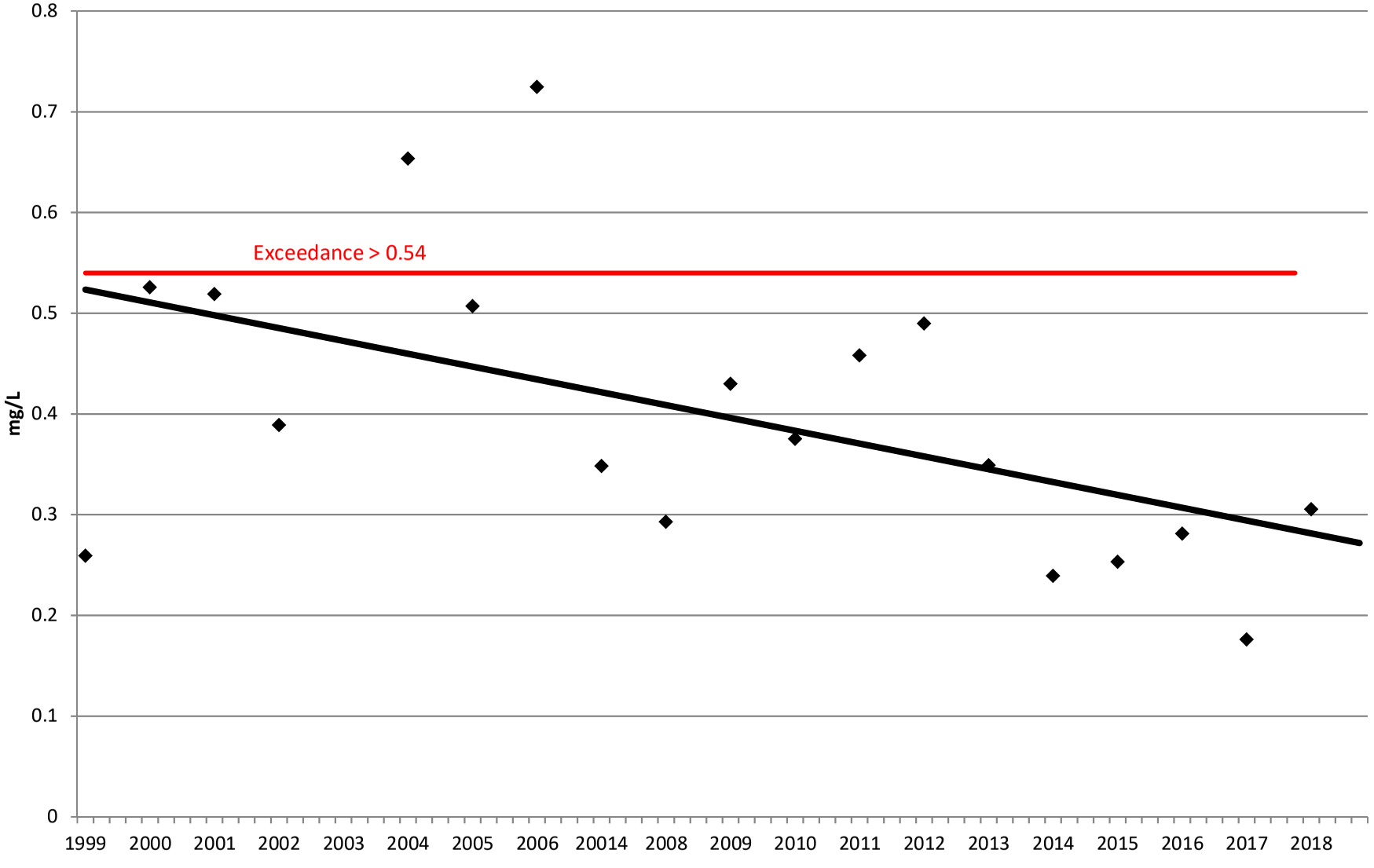

Figure 5-2
Total Nitrogen
Lake Worth Lagoon-C

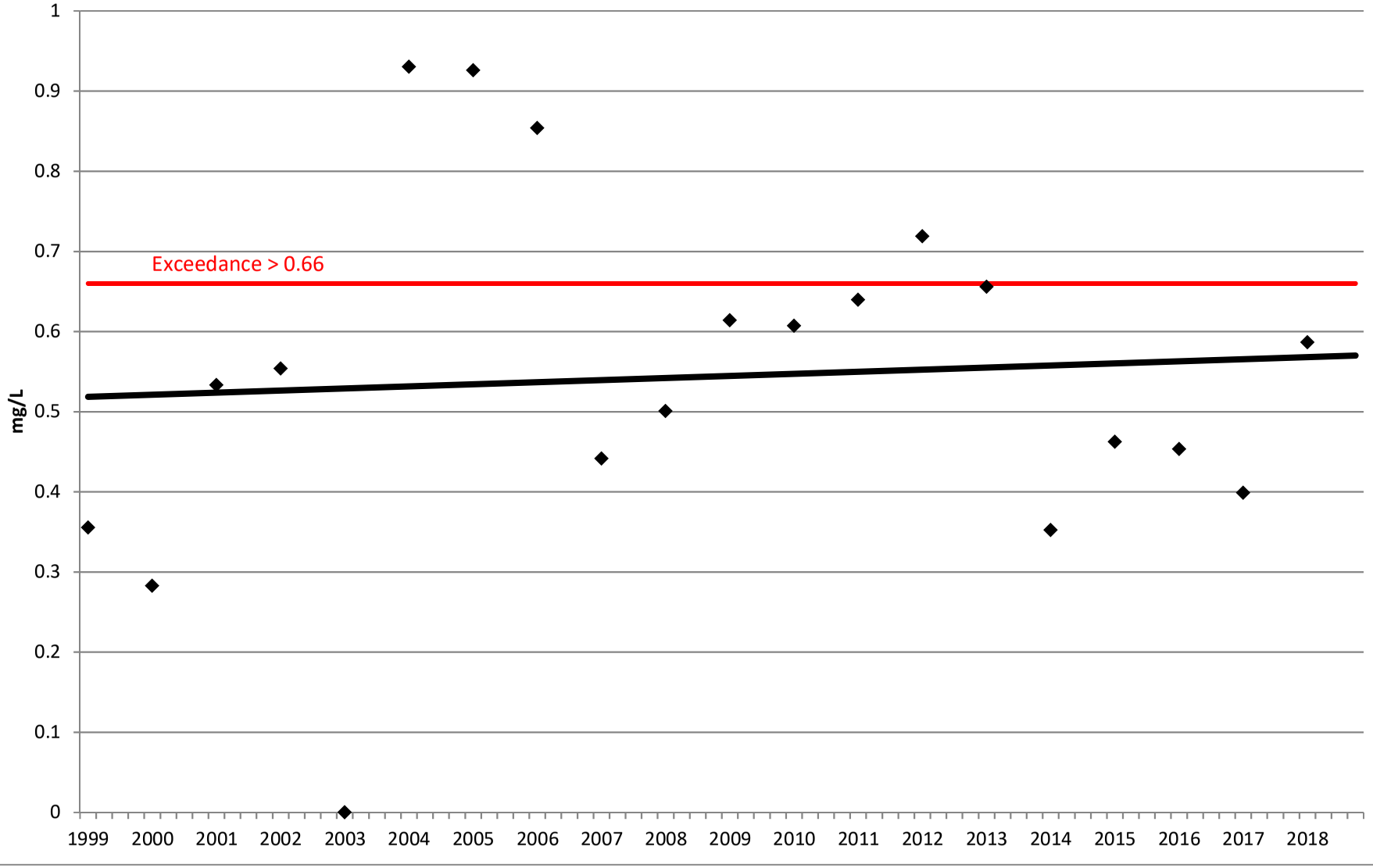

Figure 5-2
Total Nitrogen
Lake Worth Lagoon-S

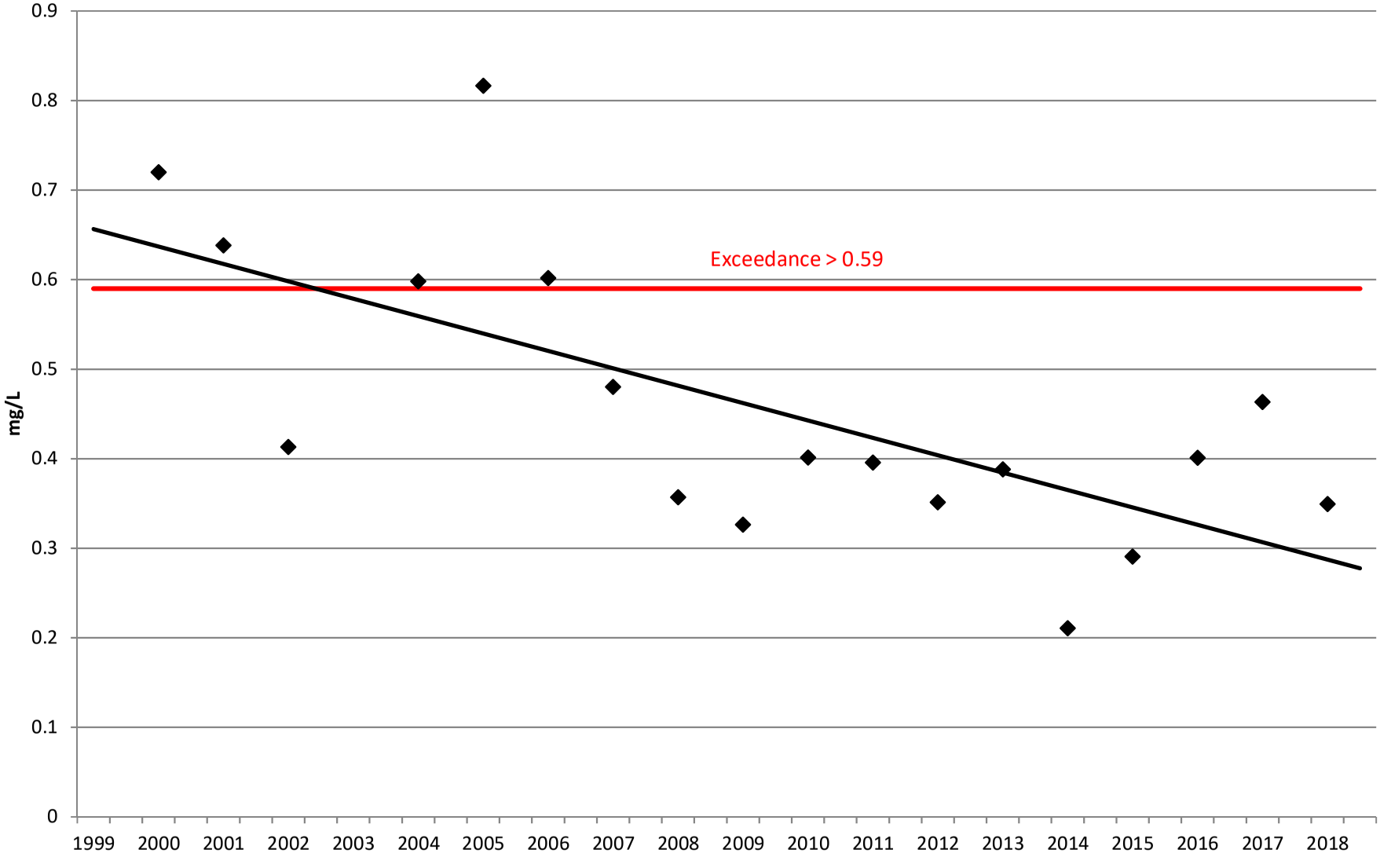

Figure 5-2
Total Nitrogen
Hillsboro

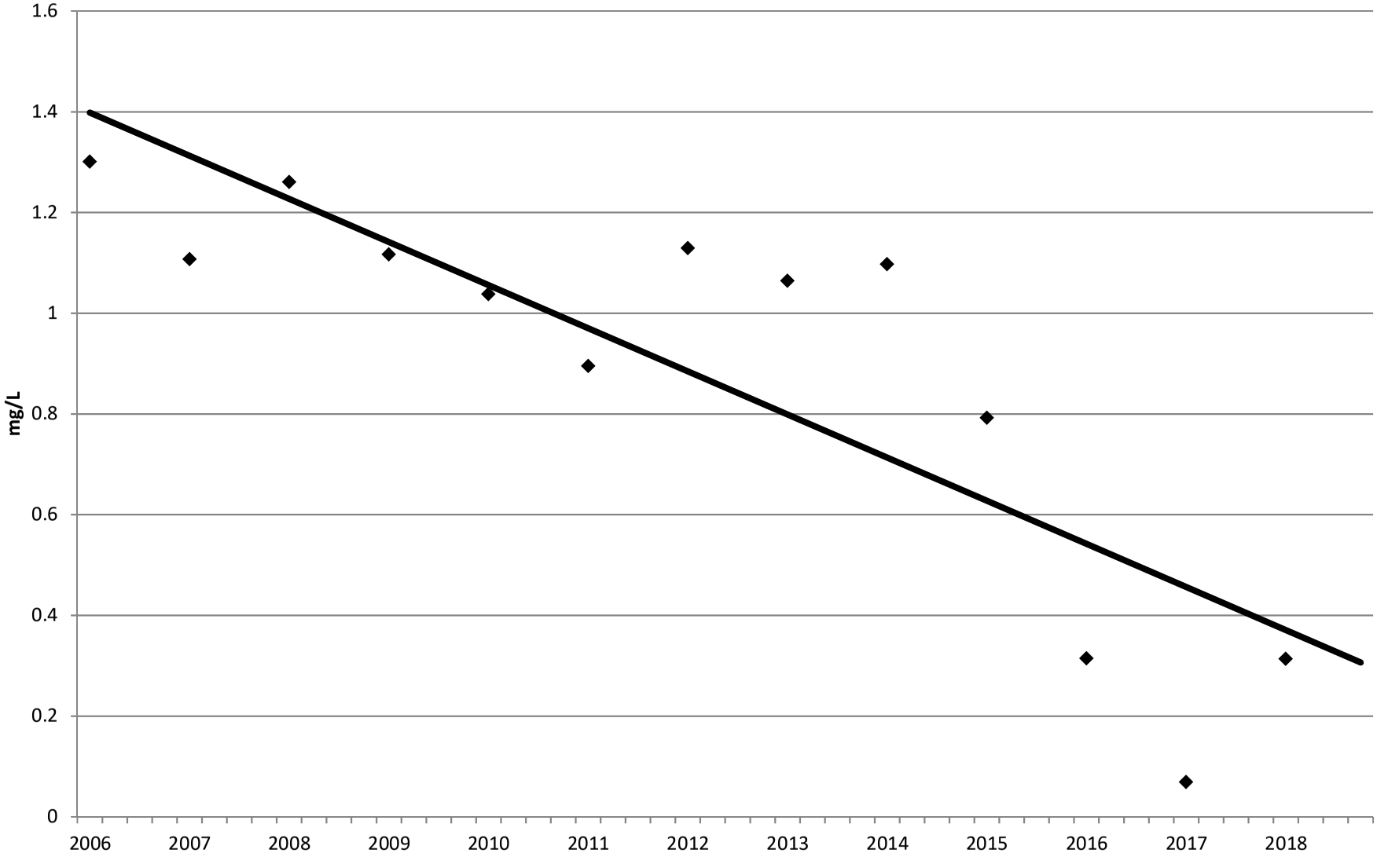

Figure 5-2
Total Nitrogen
L-8

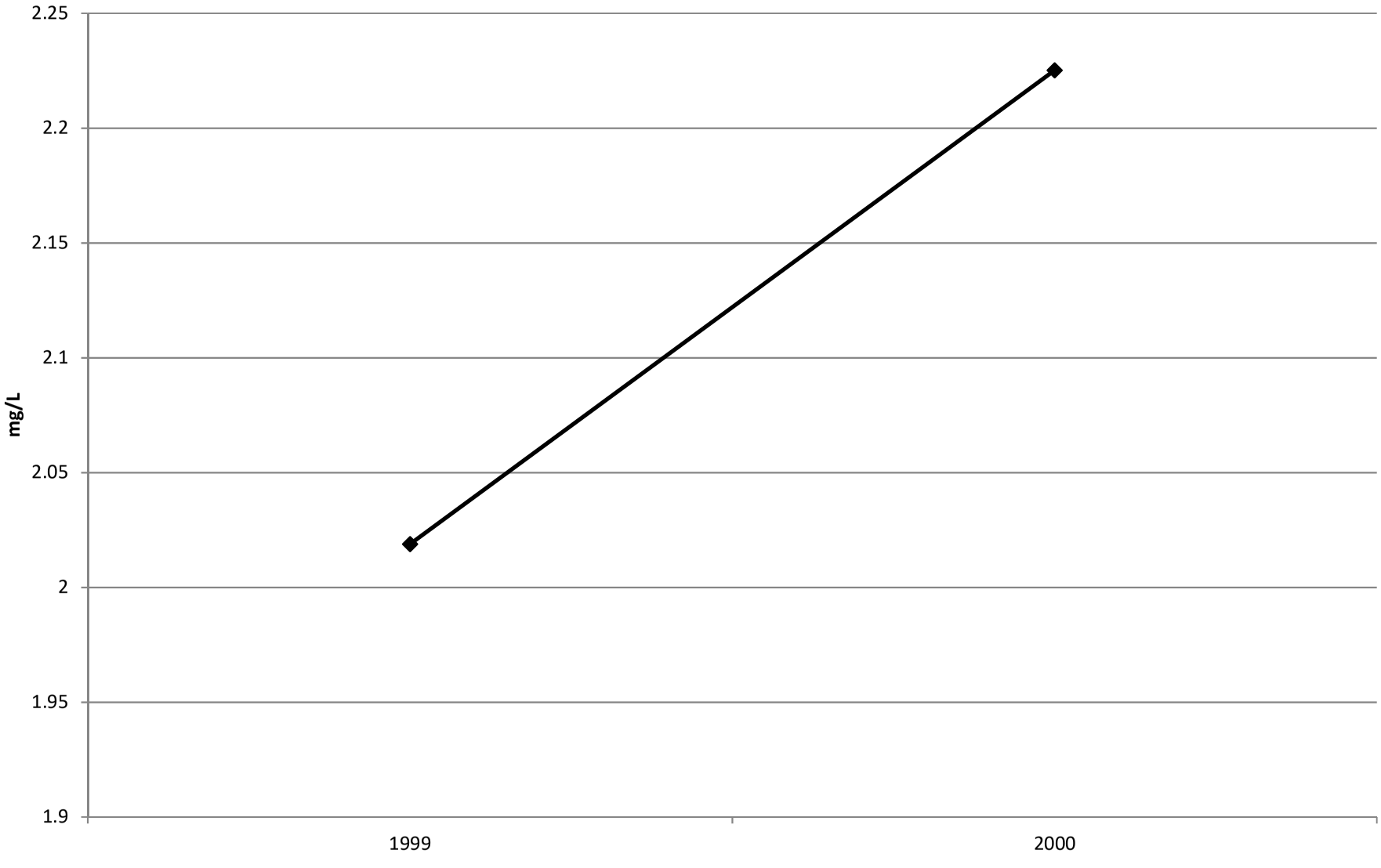

Figure 5-2
Total Nitrogen
S-2-6-7

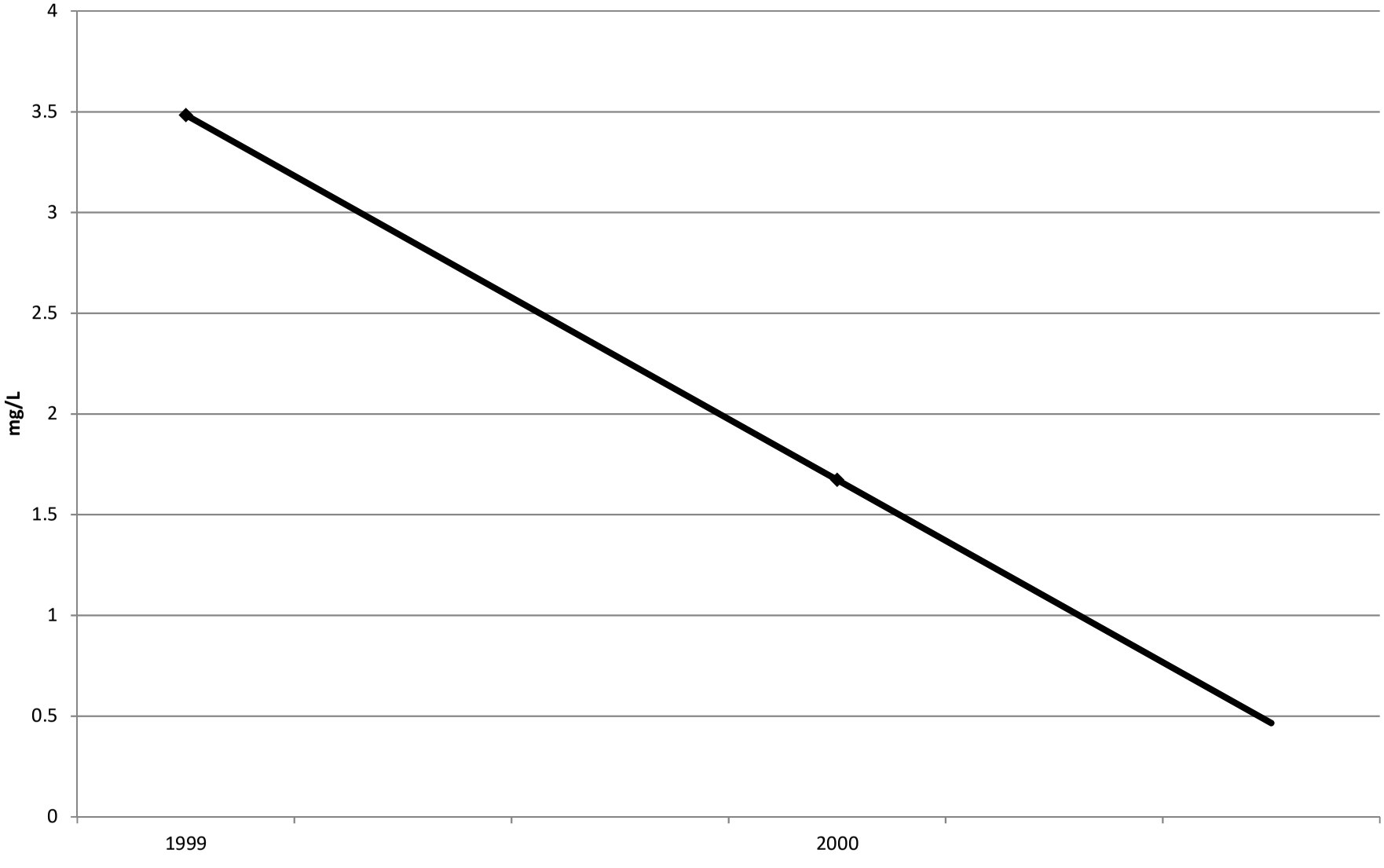

Figure 5-3
Total Phosphorus
C-15 Watershed

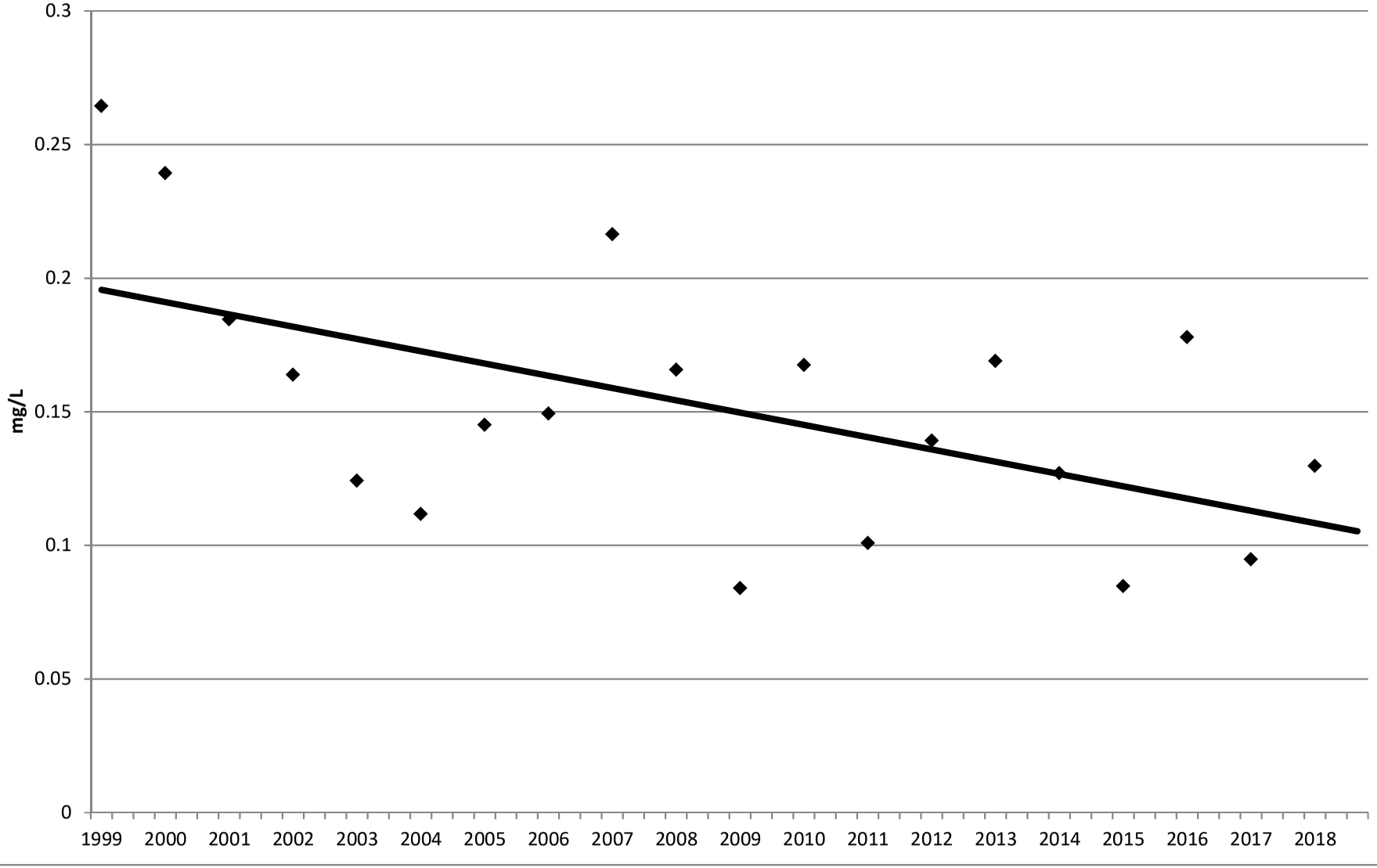

Figure 5-3
Total Phosphorous
C-16 Watershed

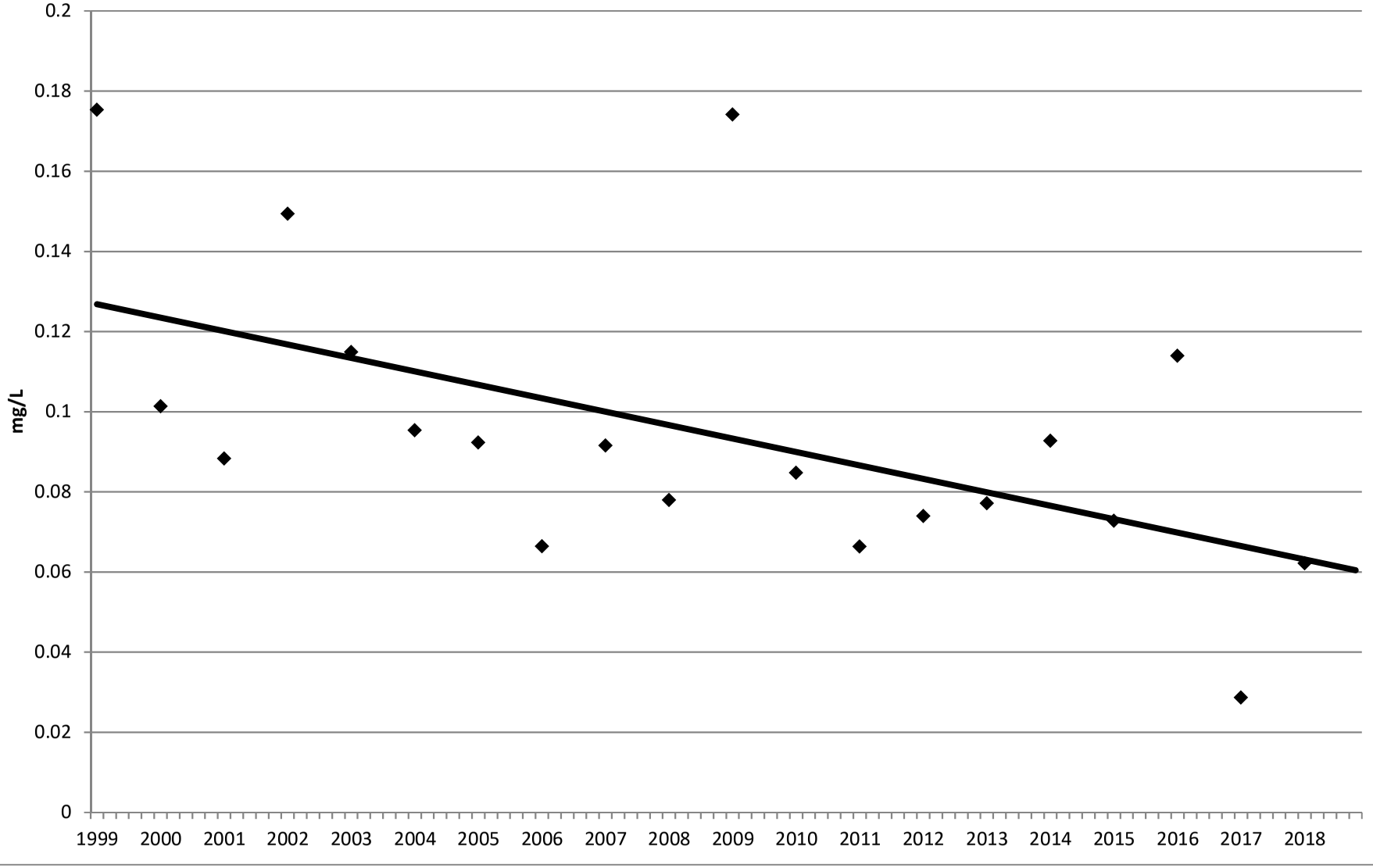

Figure 5-3
Total Phosphorus
C-17 Watershed

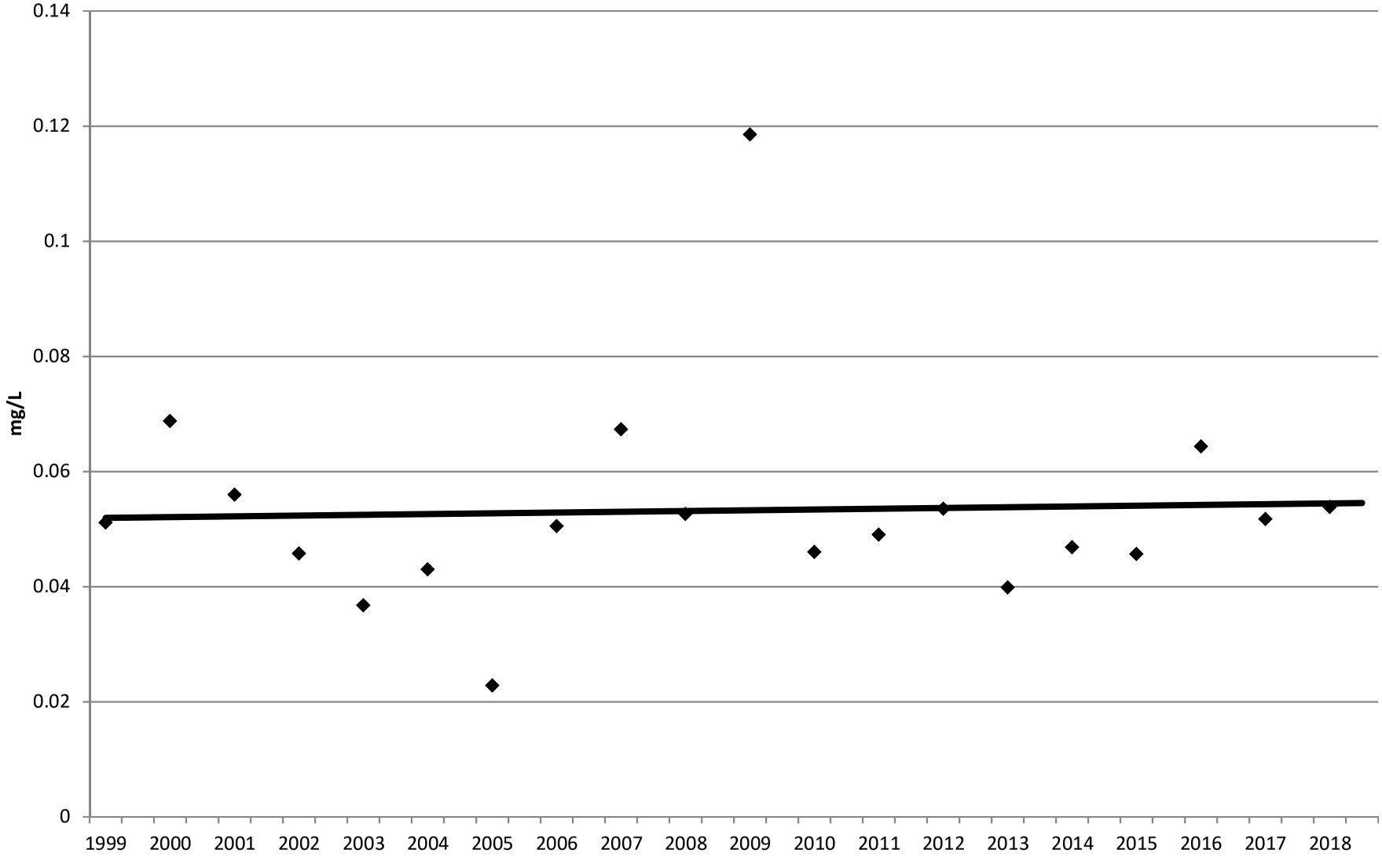

Figure 5-3
Total Phosphorus
C-18 Watershed

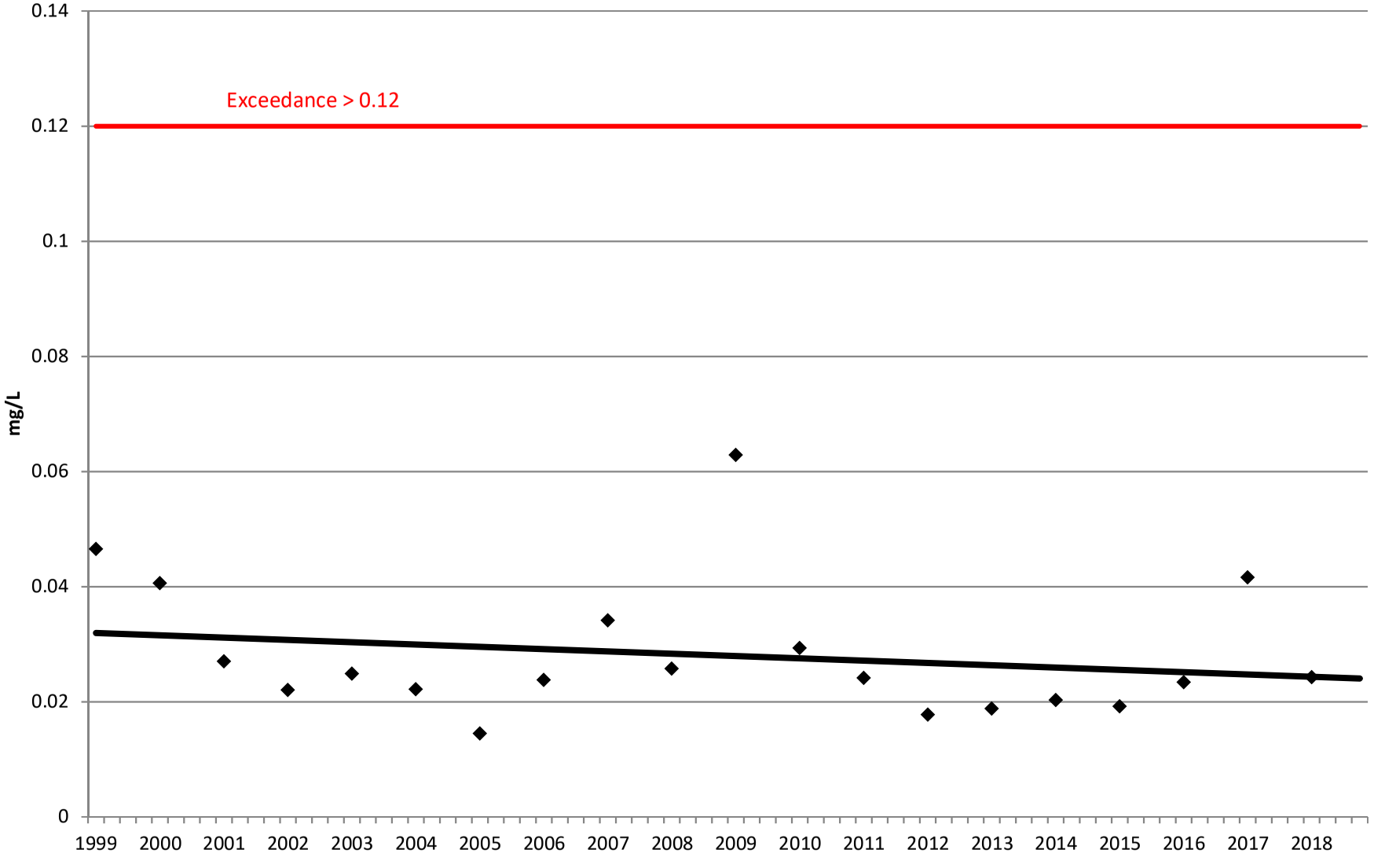

Figure 5-3
Total Phosphorus
C-51 Watershed

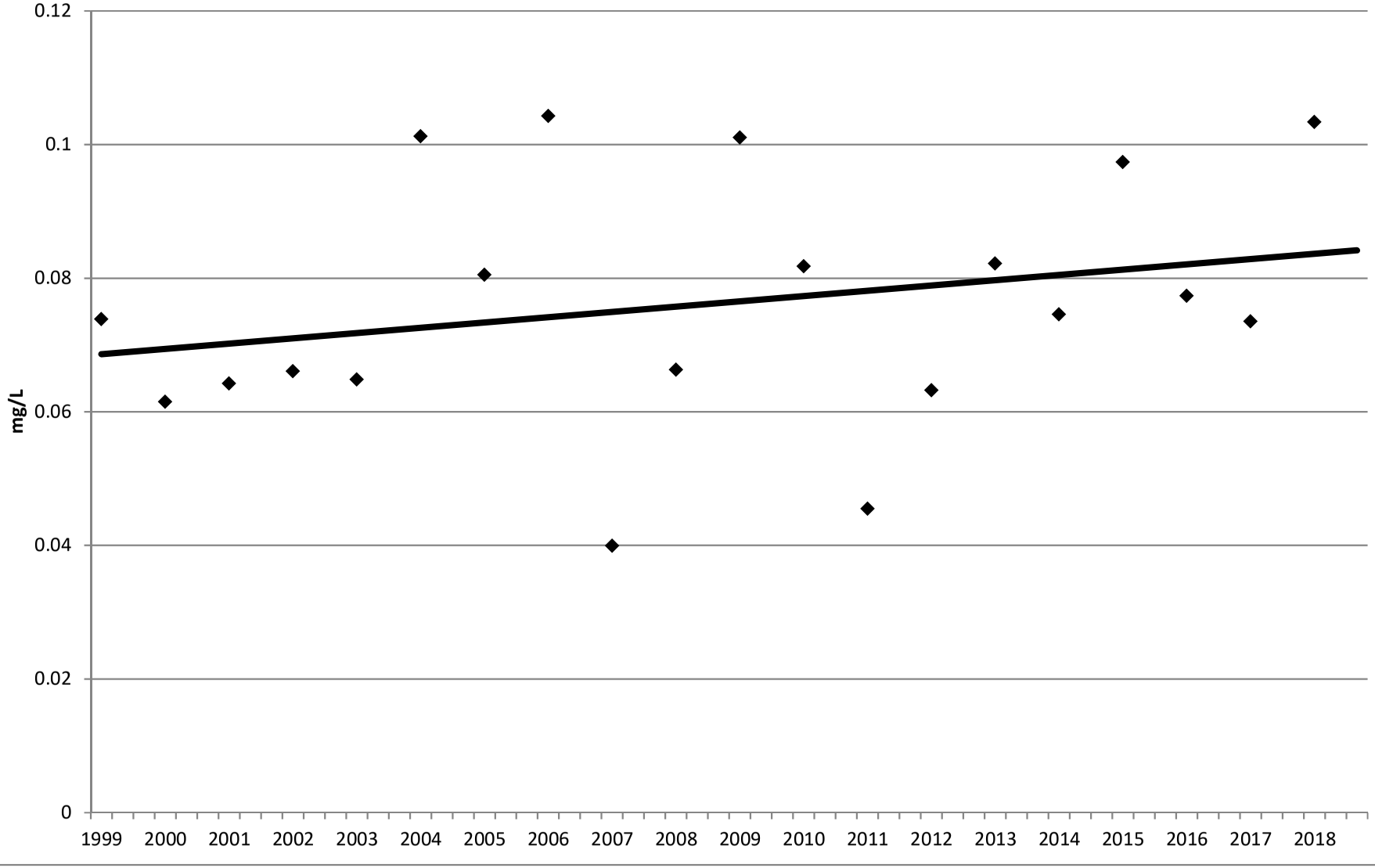

Figure 5-3
Total Phosphorus
Loxahatchee

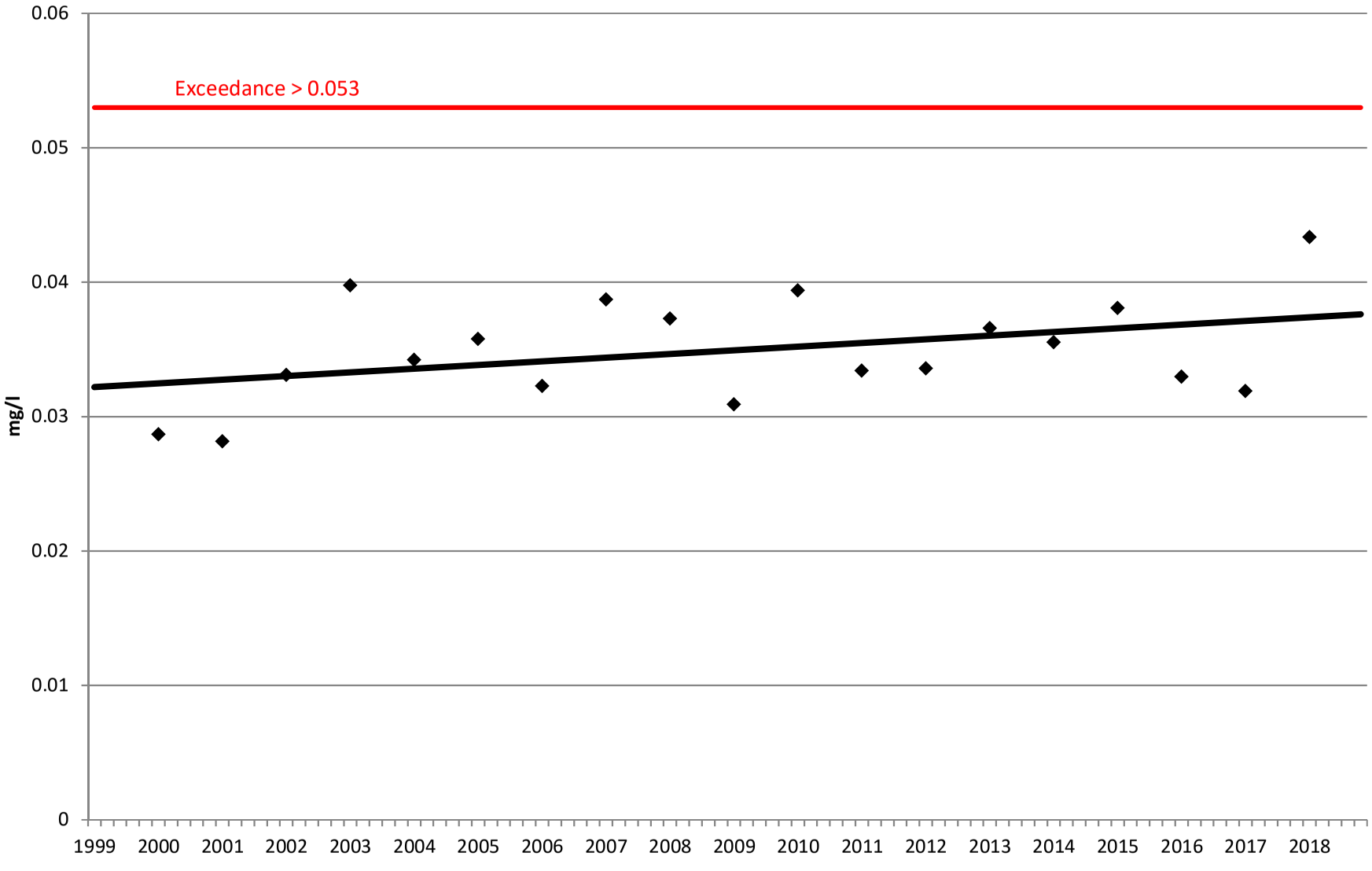

Figure 5-3
Total Phosphorus
Lake Worth Lagoon-N

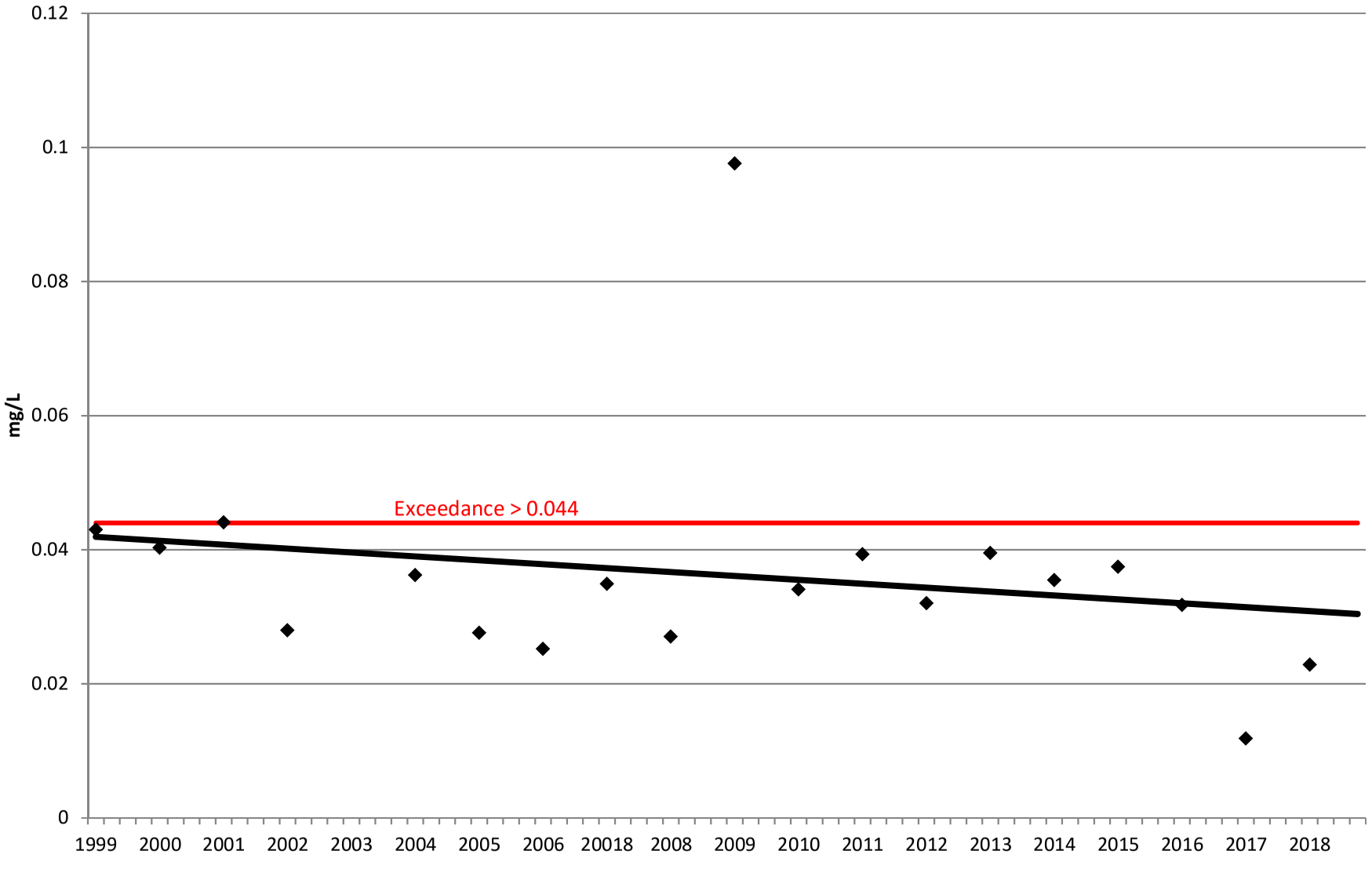

Figure 5-3
Total Phosphorus
Lake Worth Lagoon-C

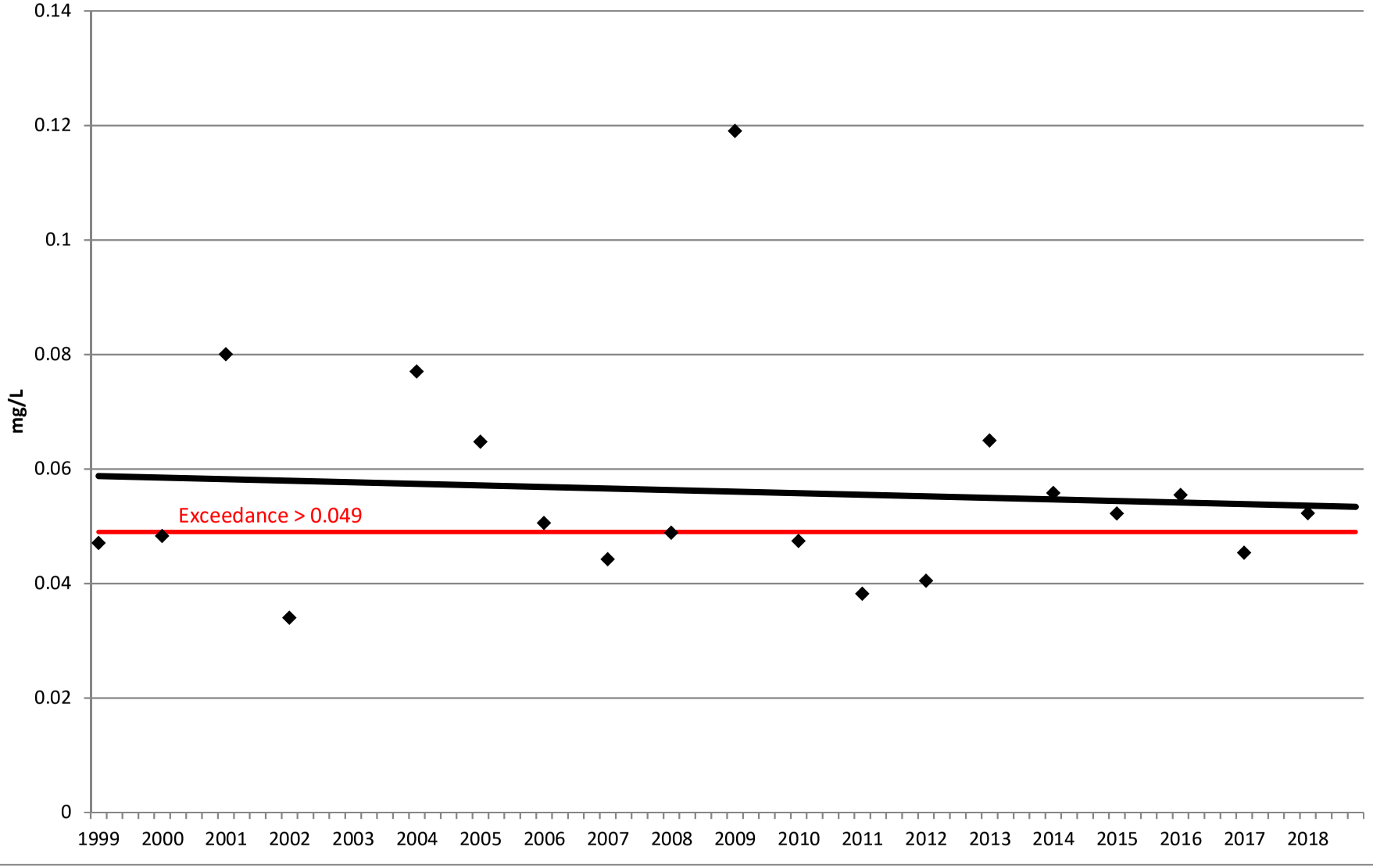

Figure 5-3
Total Phosphorus
Lake Worth Lagoon-S

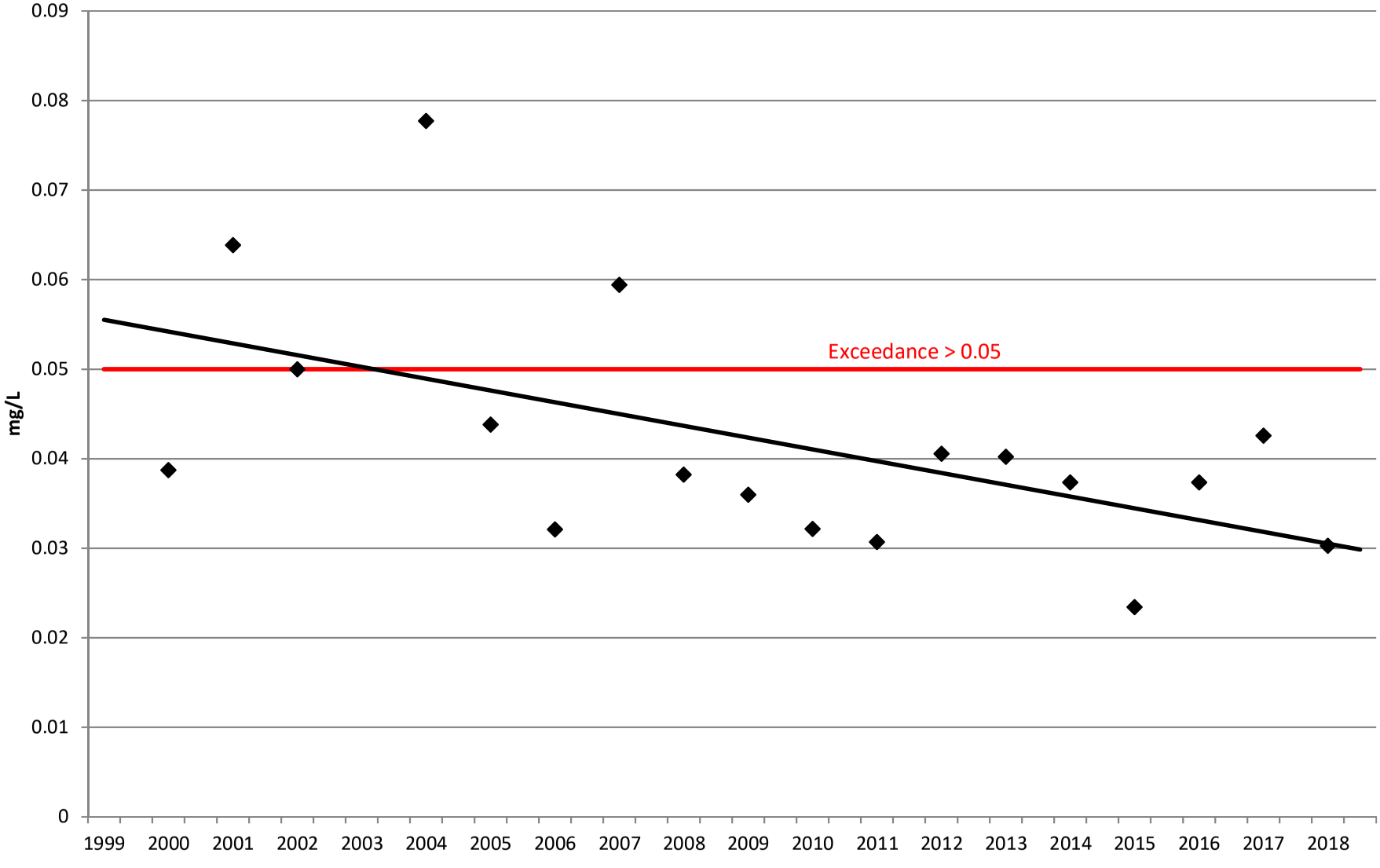

Figure 5-3
Total Phosphorus
Hillsboro

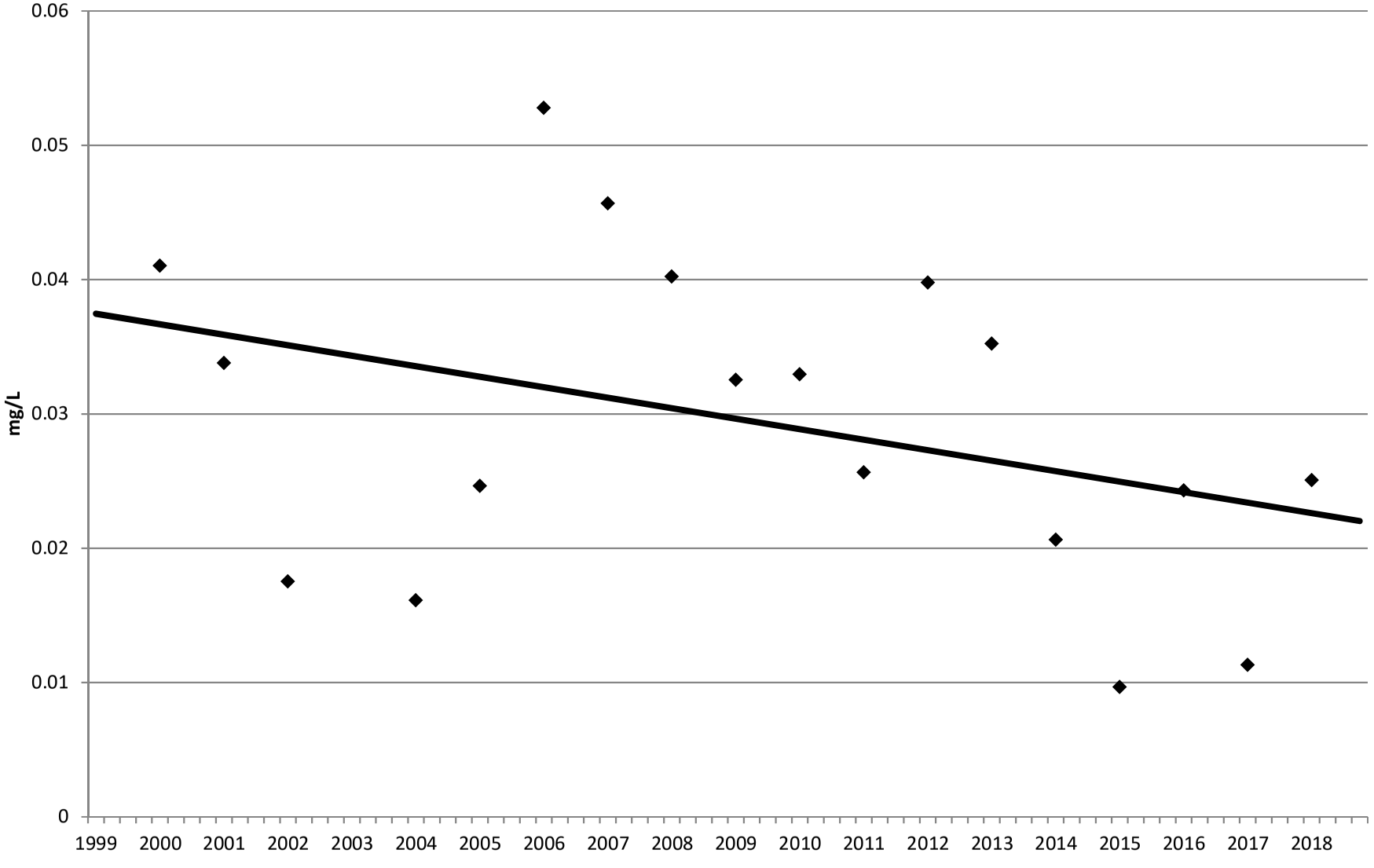

Figure 5-3
Total Phosphorus
L-8

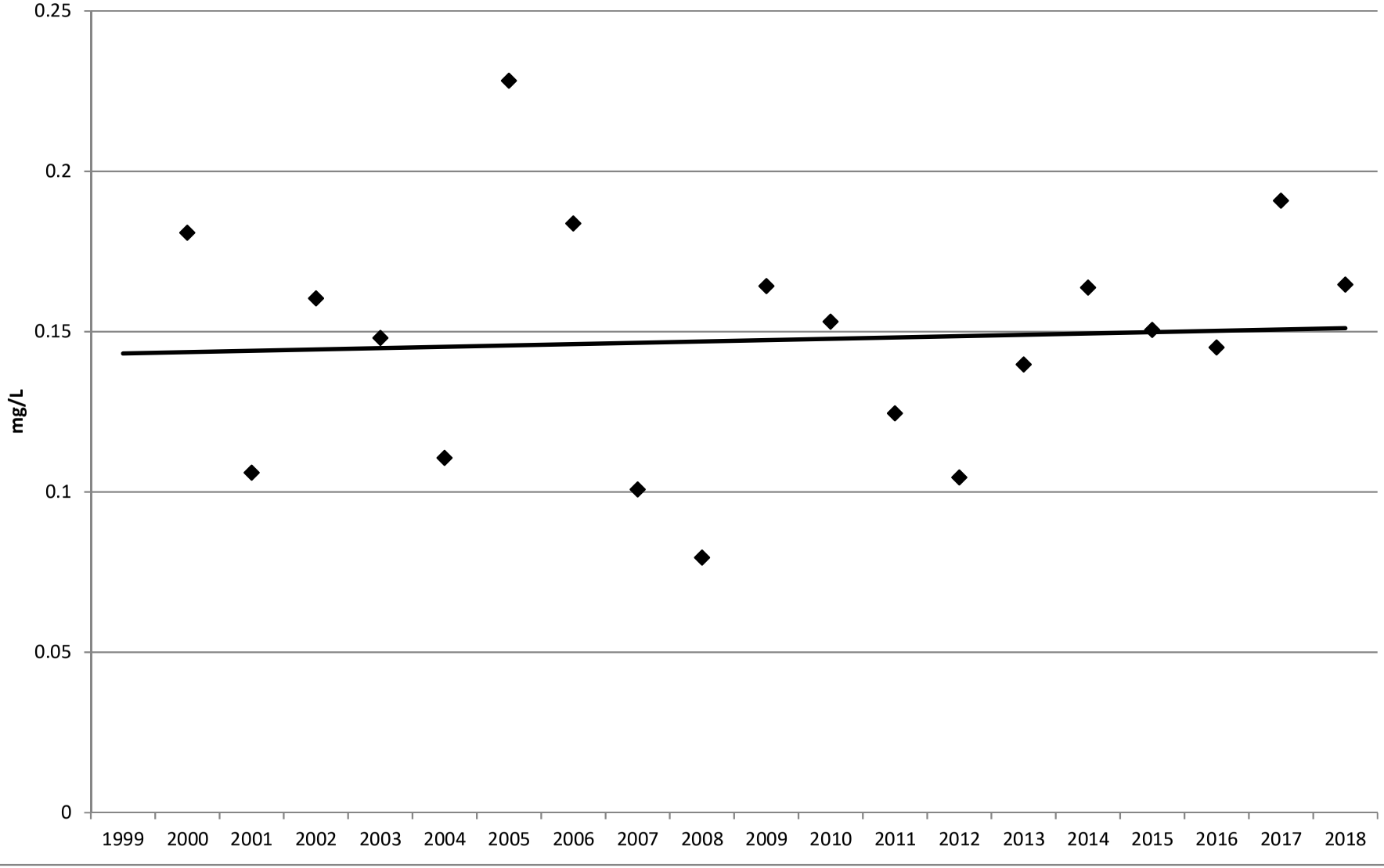

Figure 5-3
Total Phosphorus
S-2-6-7

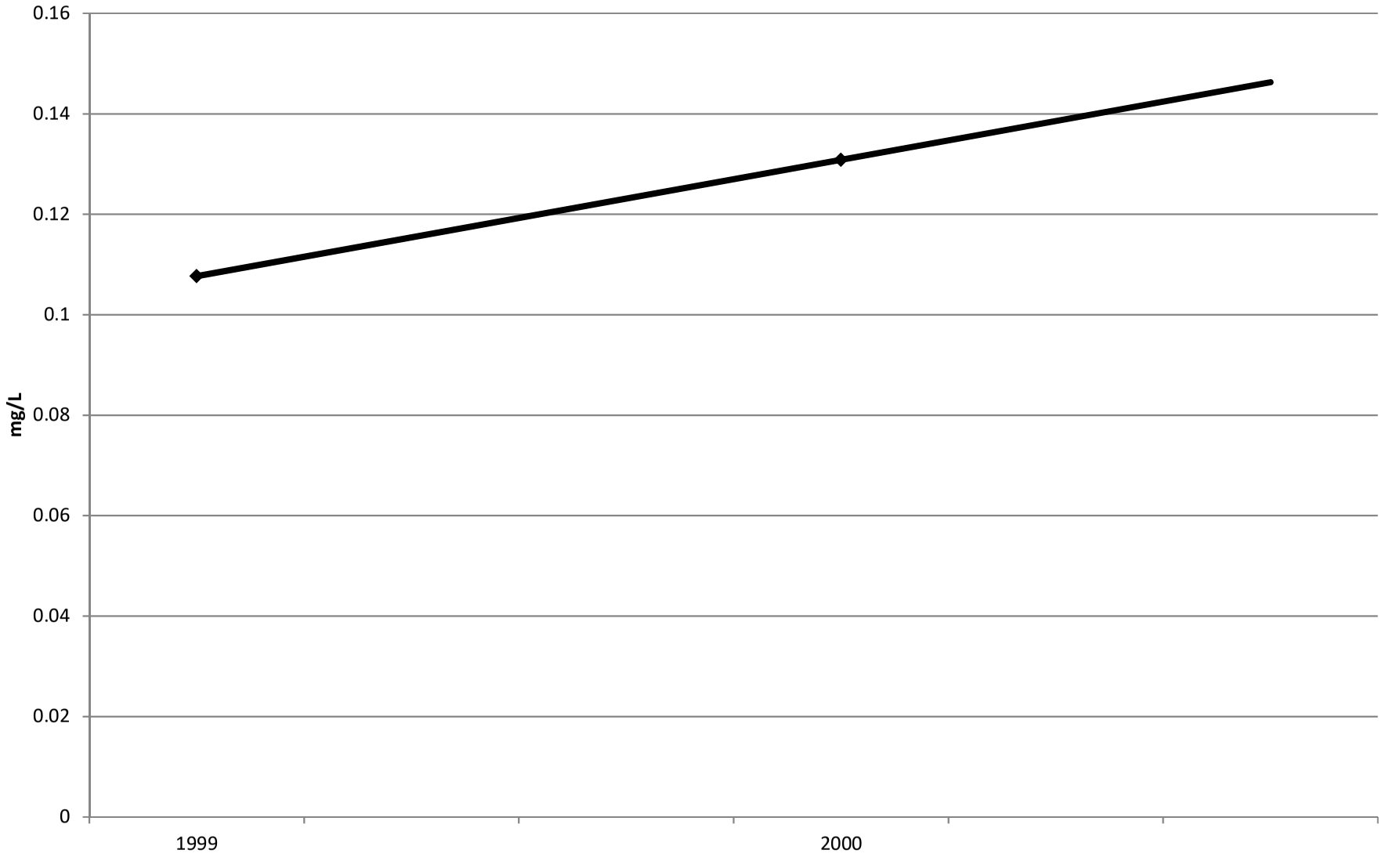

Figure 5-4
Chlorophyll-A
C-15 Watershed

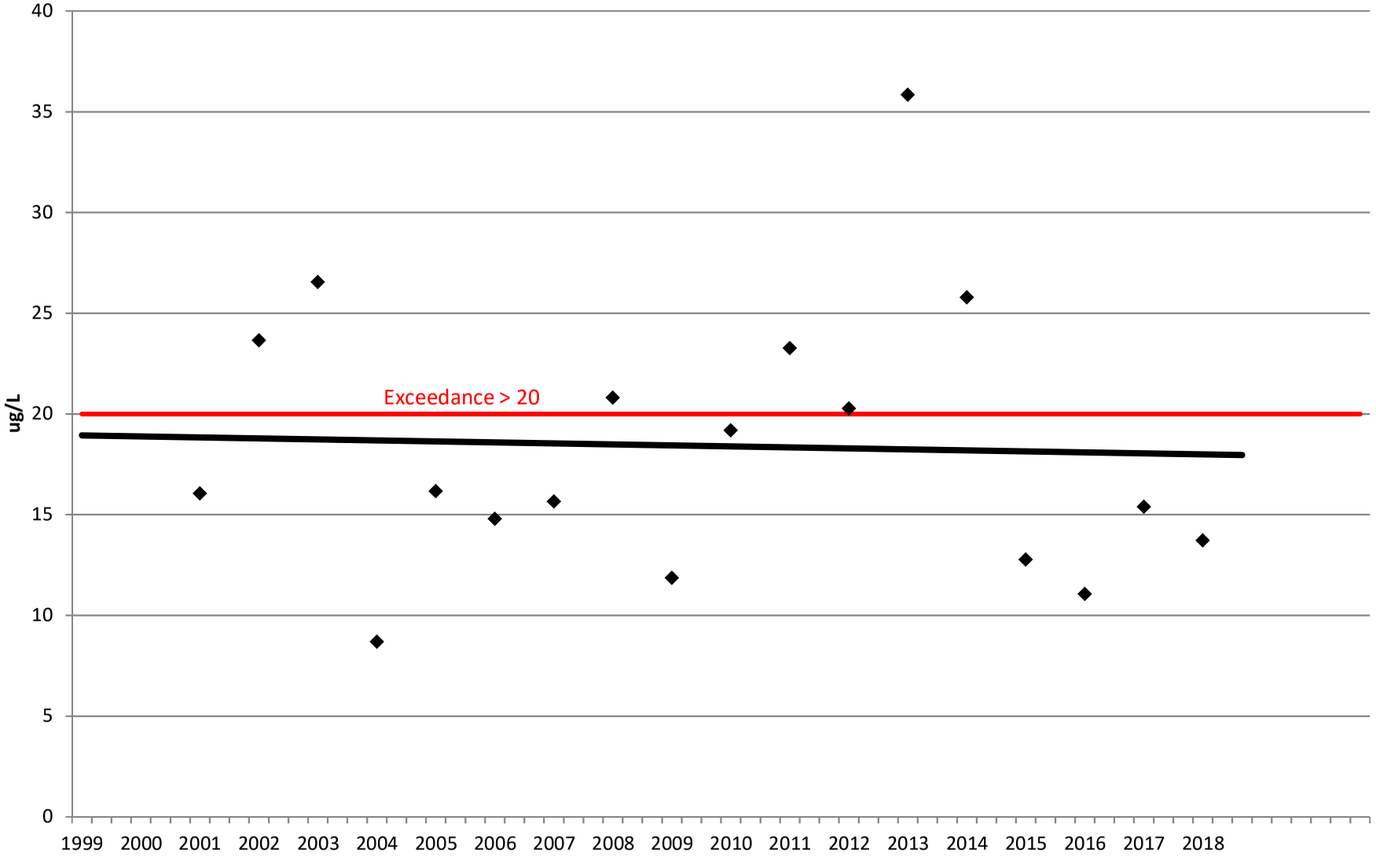

Figure 5-4
Chlorophyll-A
C-16 Watershed

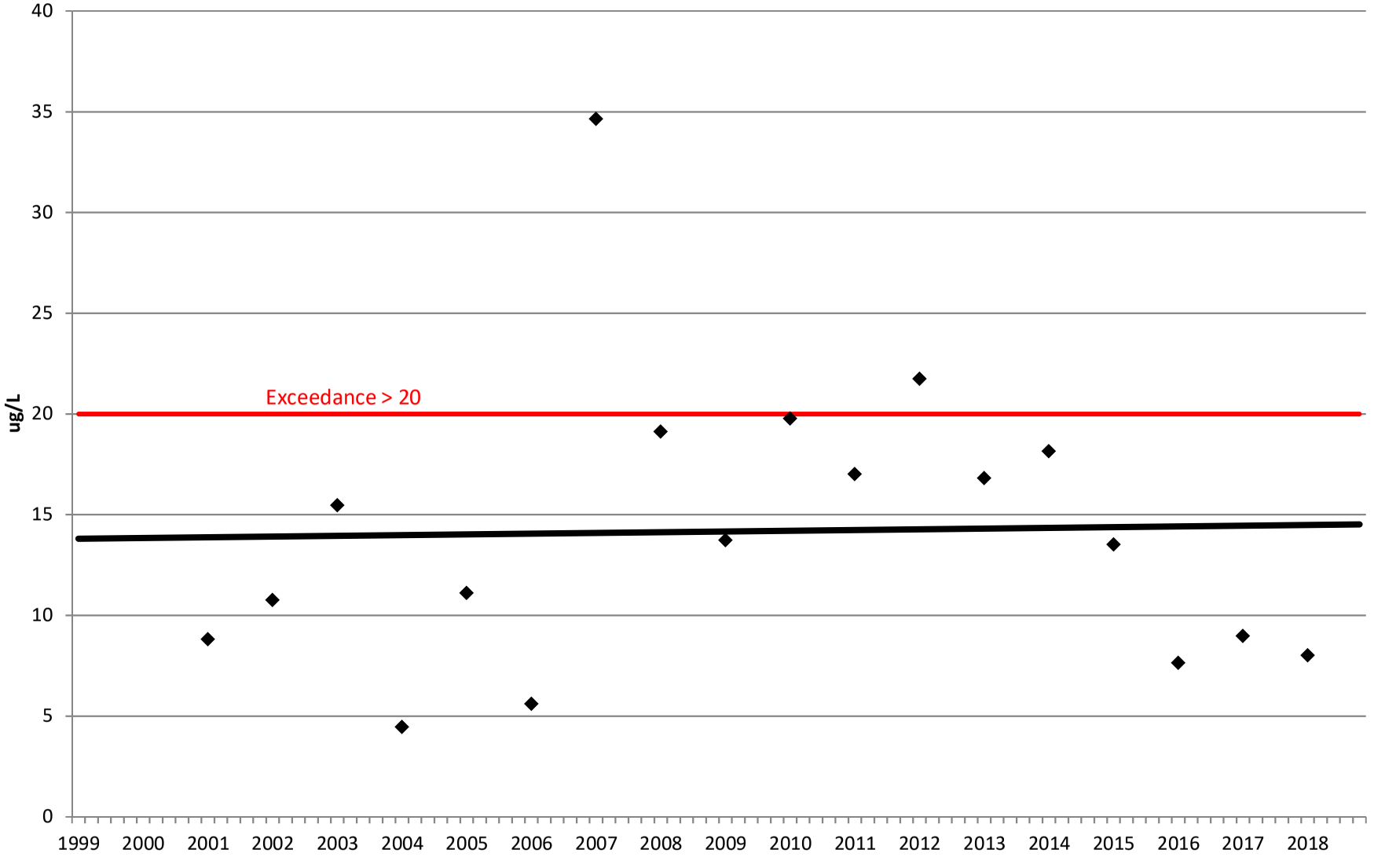

Figure 5-4
Chlorophyll-A
C-17 Watershed

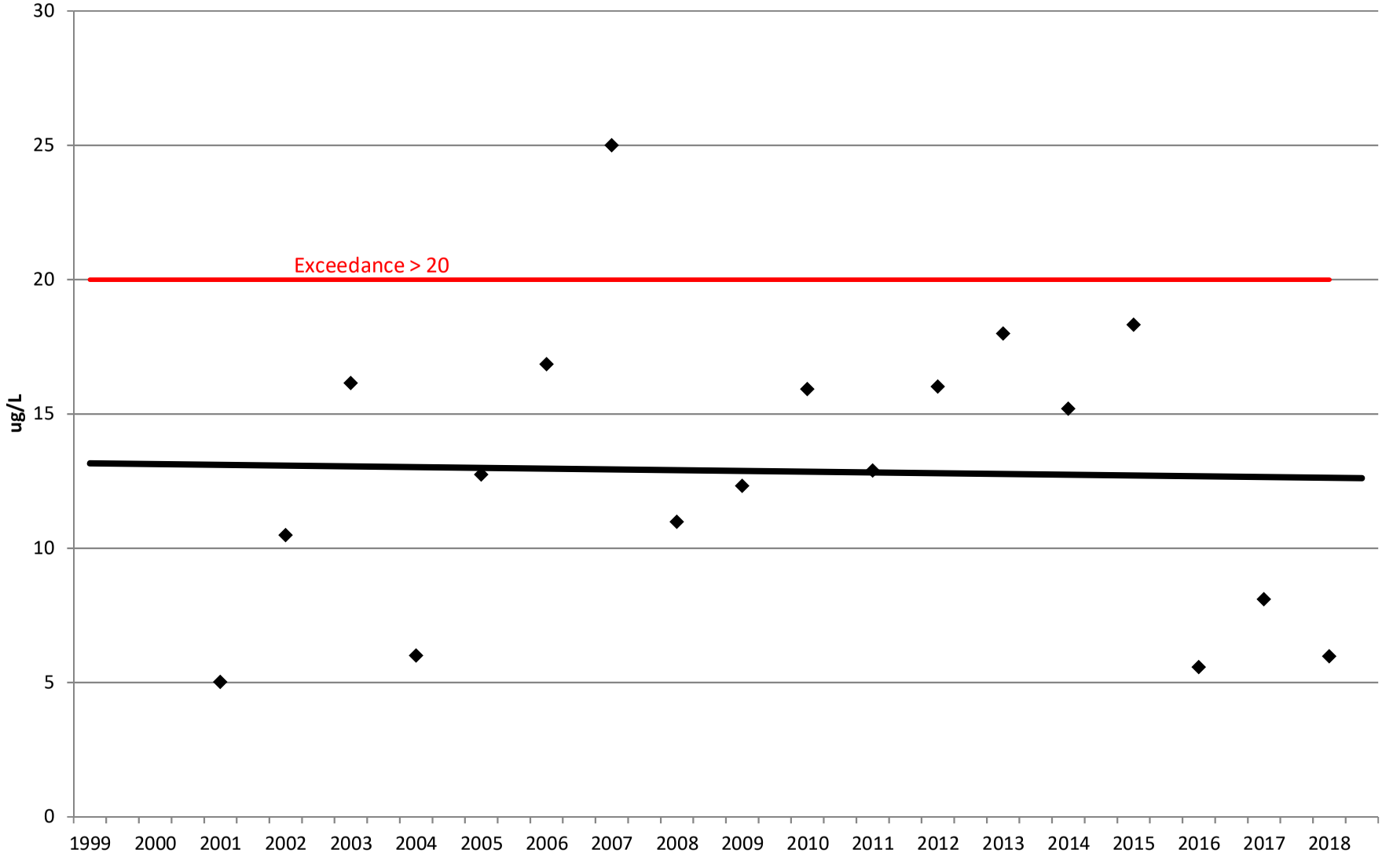

Figure 5-4
Chlorophyll-A
C-18 Watershed

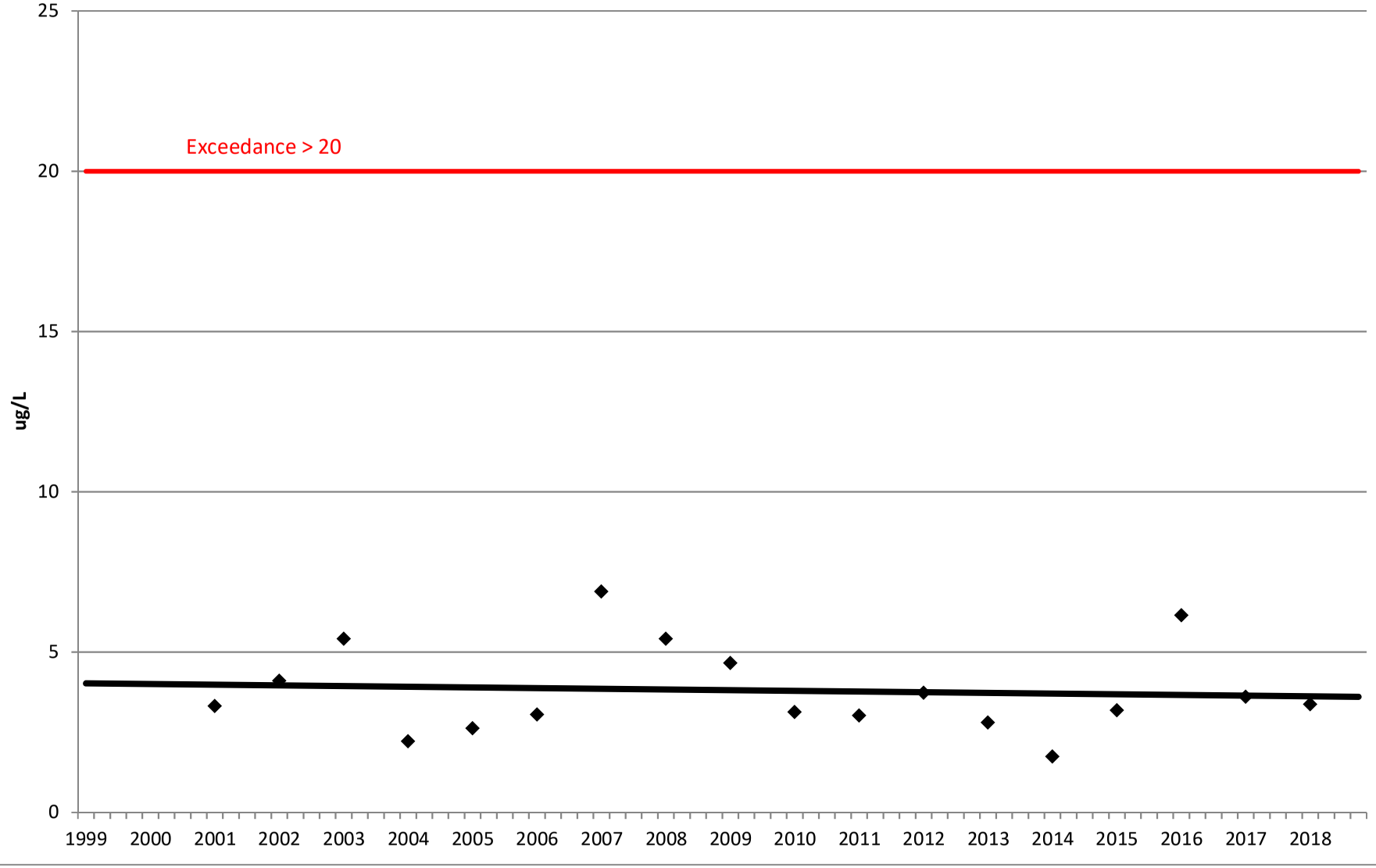

Figure 5-4
Chlorophyll-A
C-51 Watershed

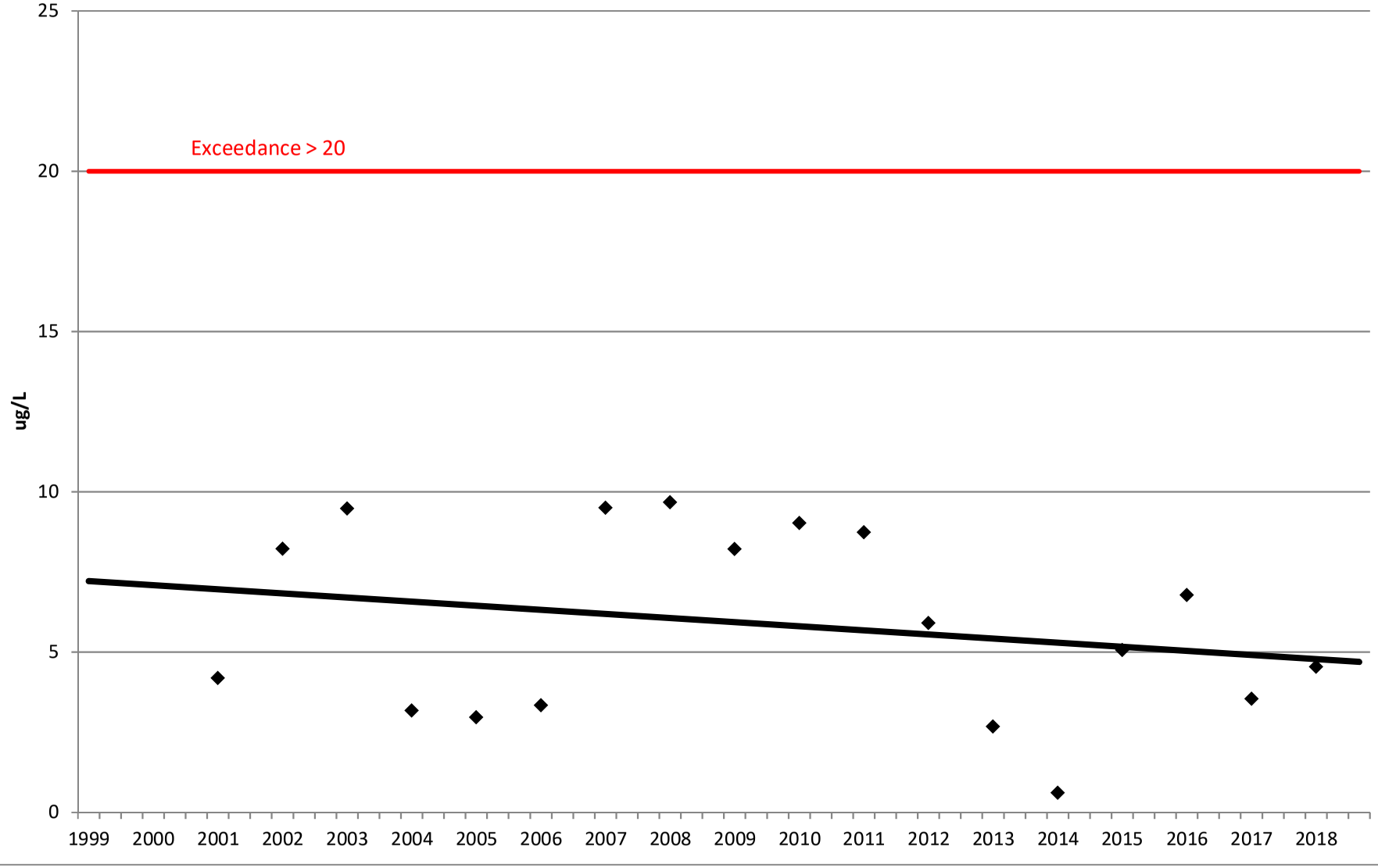

Figure 5-4
Chlorophyll-A
Loxahatchee

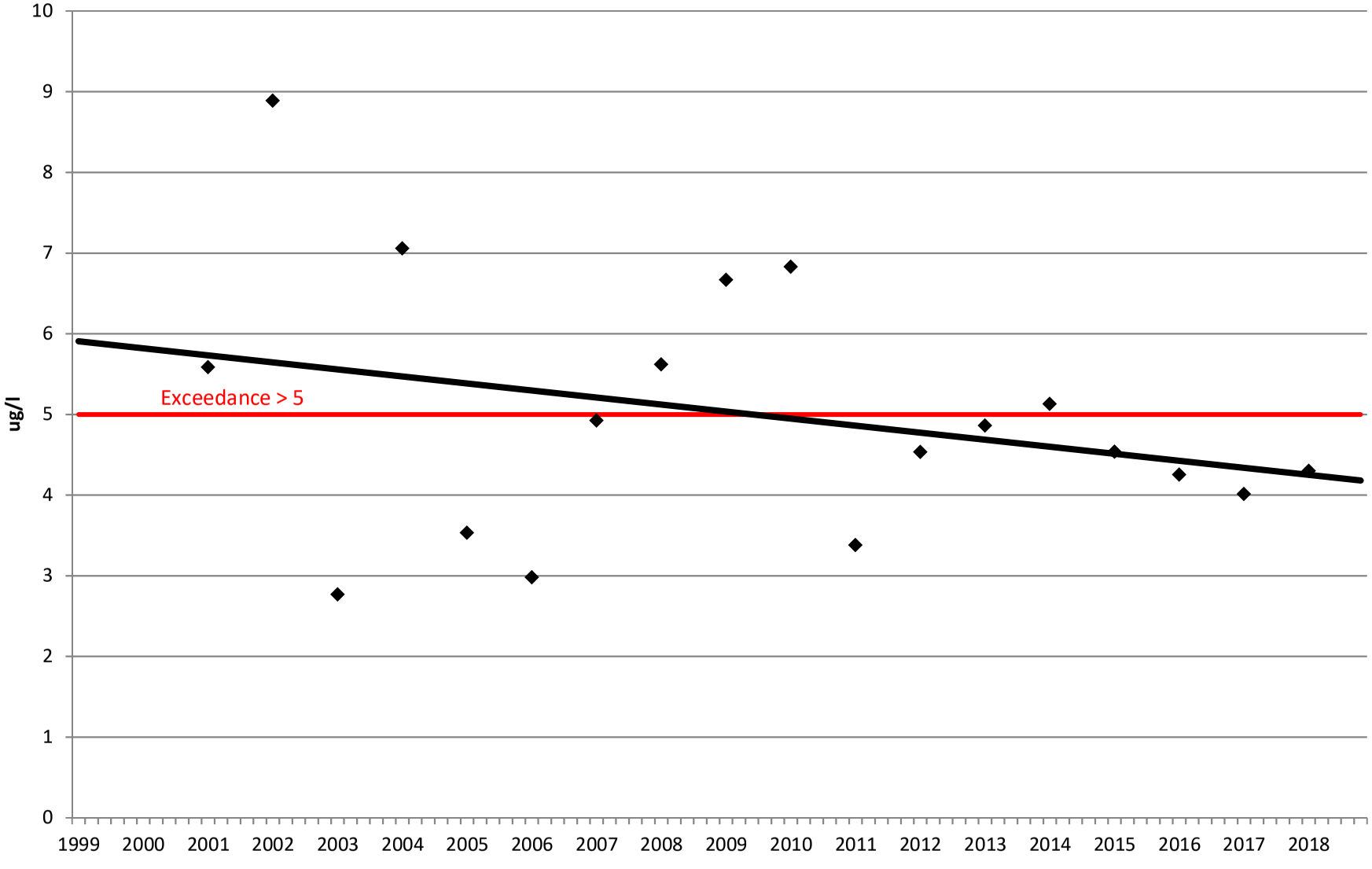

Figure 5-4
Chlorophyll-A
Lake Worth Lagoon-N

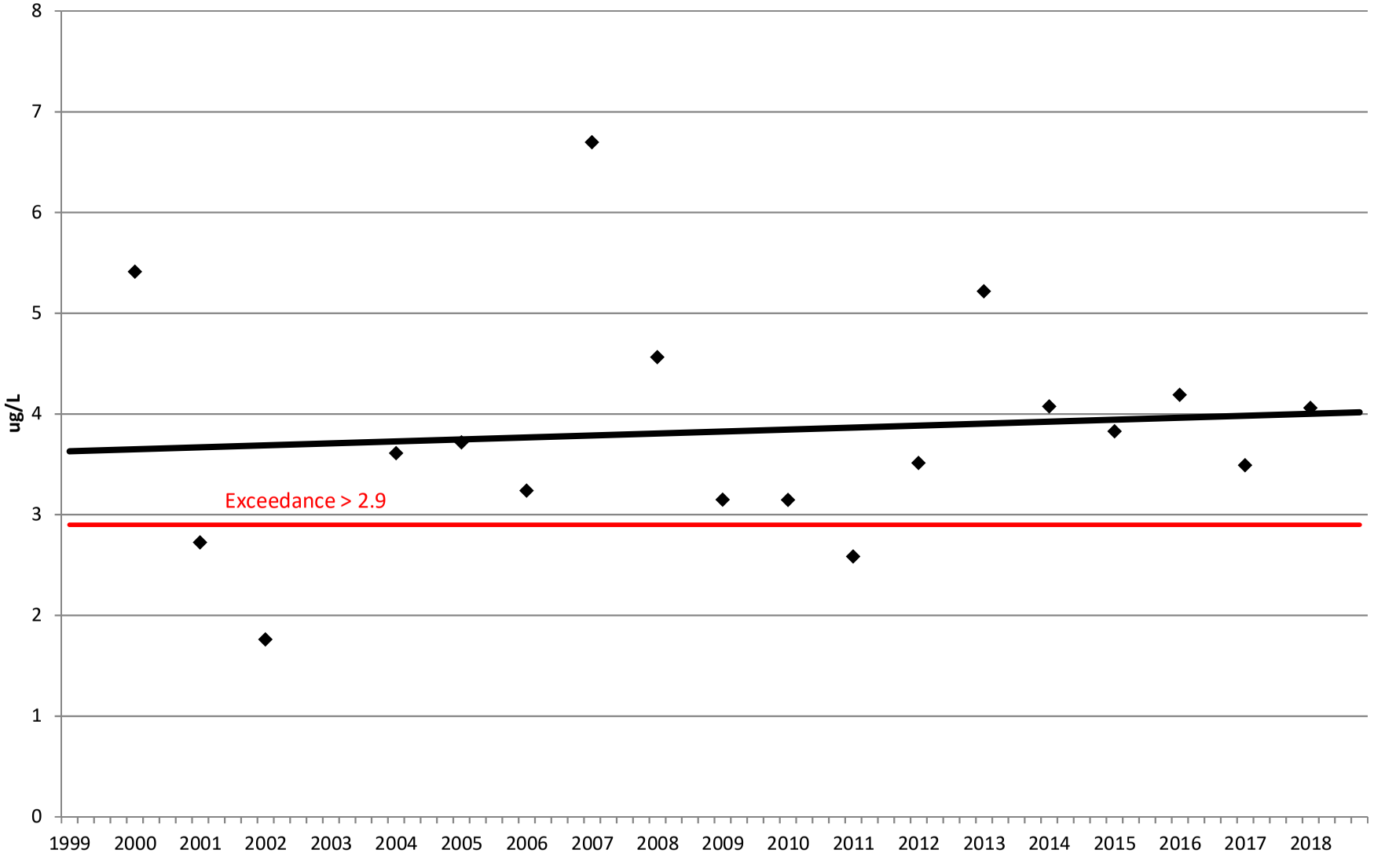

Figure 5-4
Chlorophyll-A
Lake Worth Lagoon-C

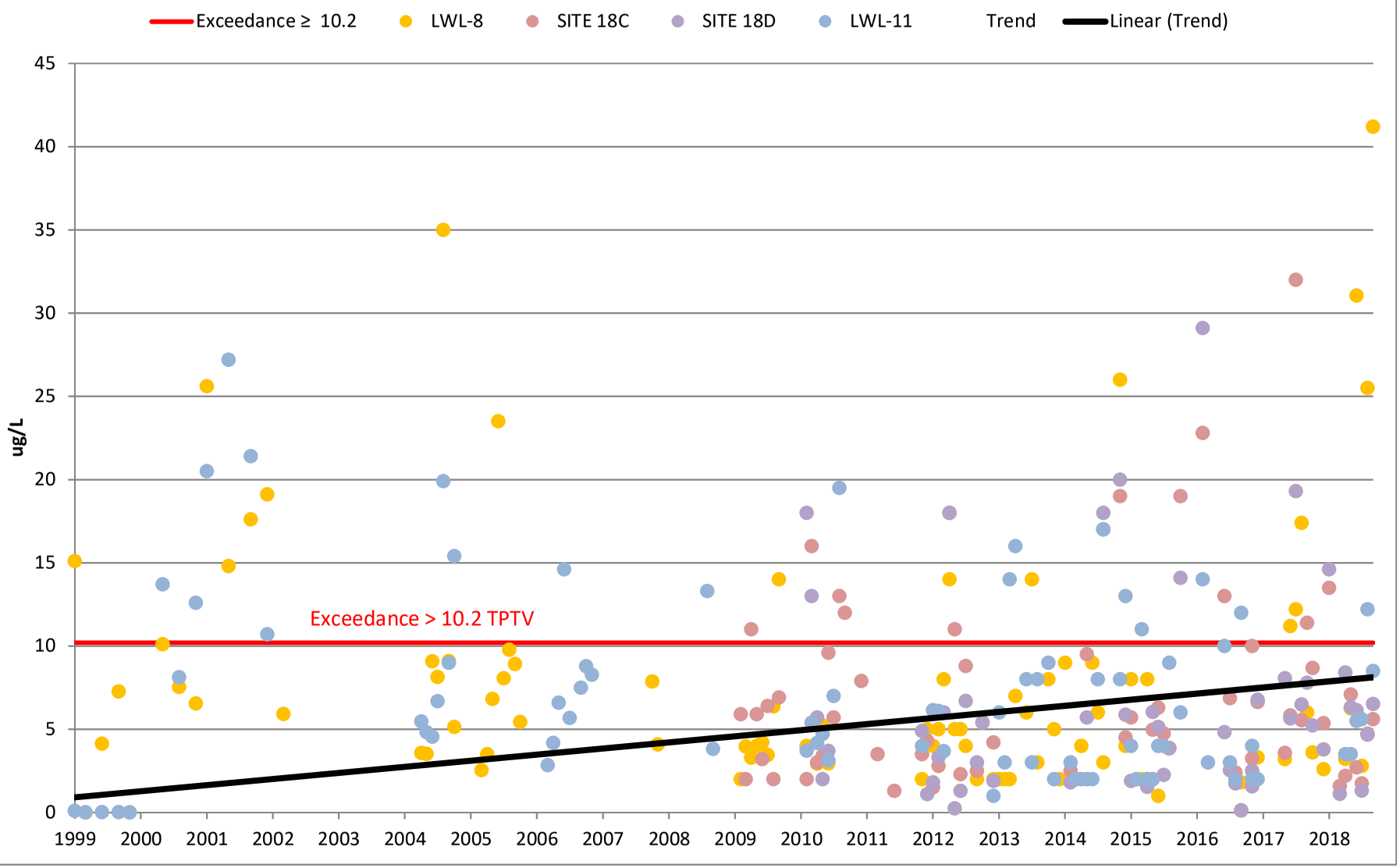

Figure 5-4
Chlorophyll-A
Lake Worth Lagoon-S

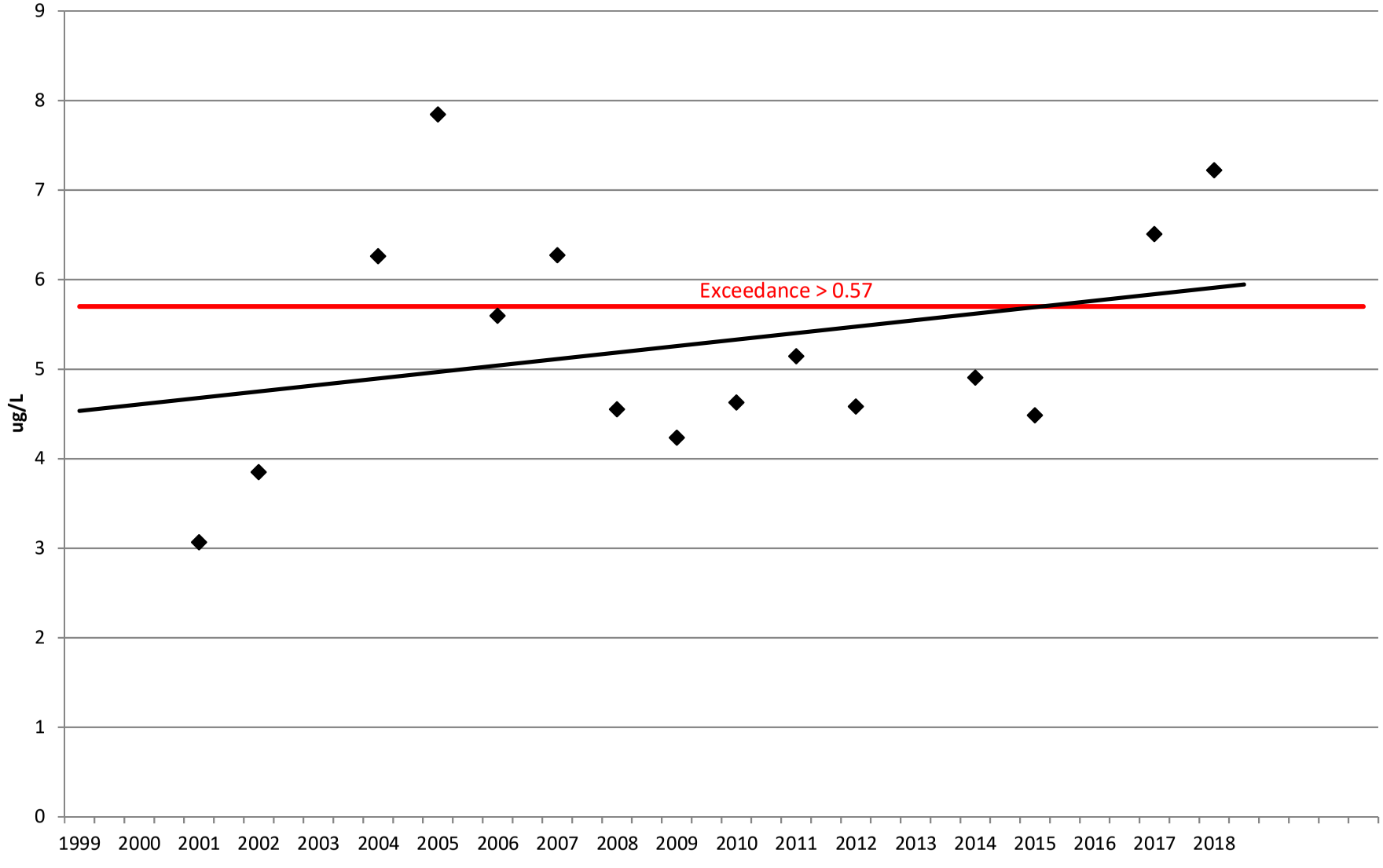

Figure 5-4
Chlorophyll-A
Hillsboro

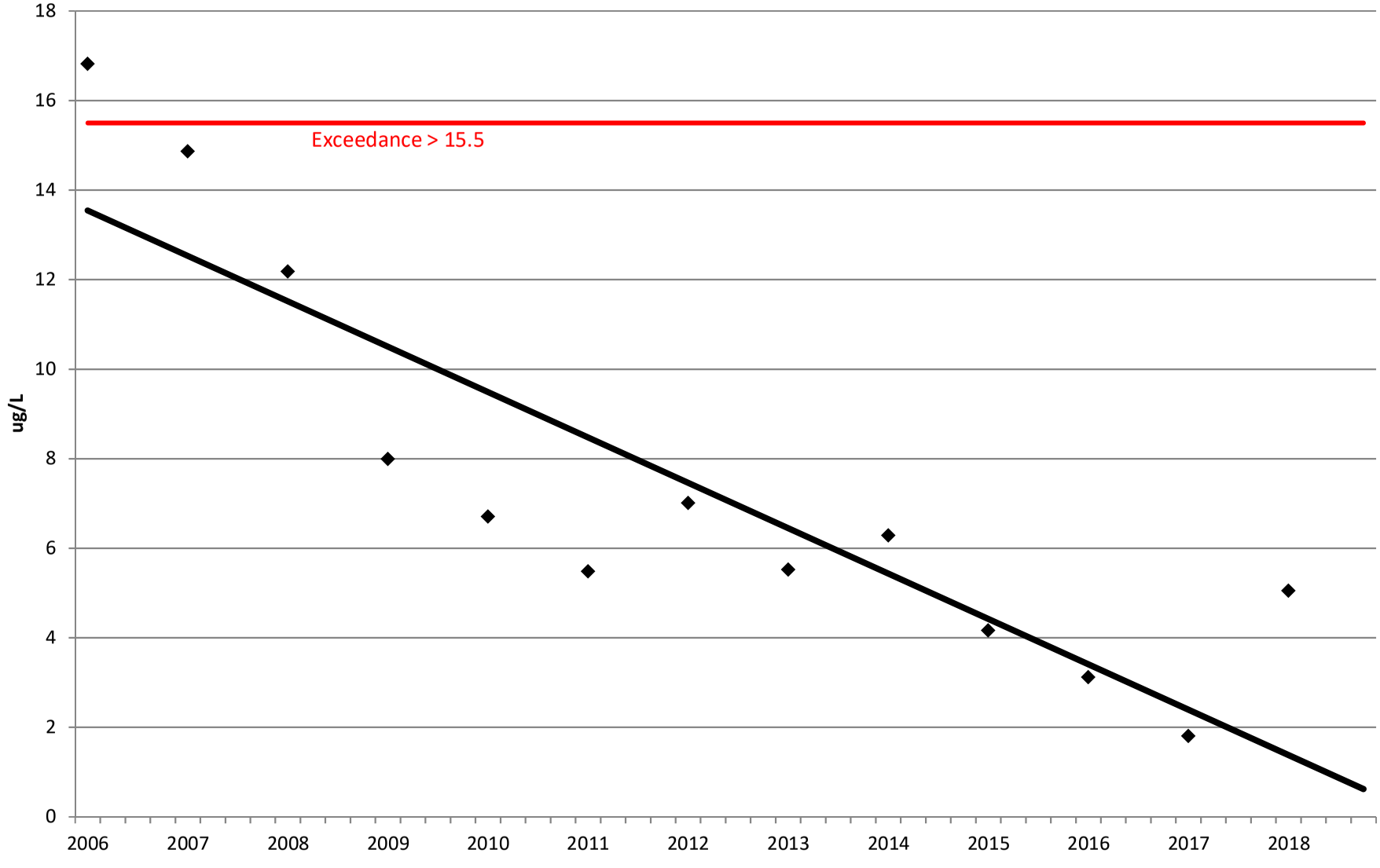

Figure 5-4
Chlorophyll-A
L-8

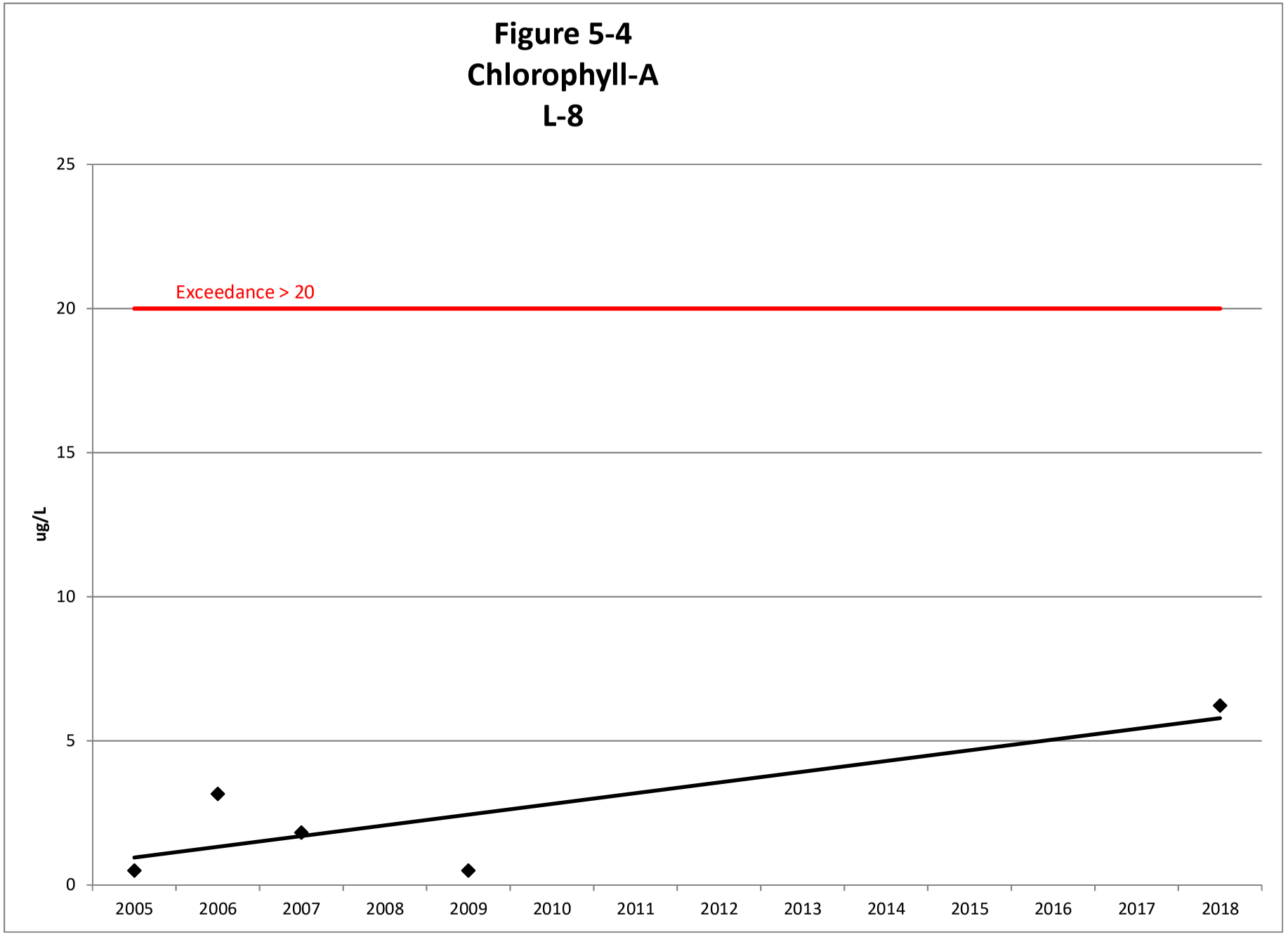

Figure 5-4
Chlorophyll-A
S-2-6-7